# OPUS2 

Grenfell Tower Inquiry

Day 92

February 17, 2021

Opus 2 - Official Court Reporters

Phone: +44 (0)20 30085900
Email: transcripts@opus2.com
Website: https://www.opus2.com


```
SIR MARTIN MOORE-BICK: Good morning, everyone. Welcome to
    today's hearing. As usual, I'm here with my fellow
    panel members, Ms Istephan and Mr Akbor.
MS ISTEPHAN: Good morning.
MR AKBOR: Good morning, everyone.
SIR MARTIN MOORE-BICK: Today we're going to continue
    hearing evidence from Mr Schmidt, the president of
    Arconic.
        The first thing I need to do is to ensure that our
    interpreters are online, so to speak, and can hear and
    see everything that's necessary.
MS KENNEDY: We are both online and we can both see and hear
    you.
SIR MARTIN MOORE-BICK: Thank you very much indeed.
    So the next thing we do is to check that Mr Schmidt
    is there, and that he's able to see me and hear me
    clearly.
        Mr Schmidt, are you there?
            MR CLAUDE SCHMIDT (continued)
                (Evidence via interpreter)
THE WITNESS: (Interpreted): Yes, and good morning to
    everyone.
SIR MARTIN MOORE-BICK: Thank you, and good morning to you.
1
    We are going to resume your evidence in just
1
    a moment, but I think we had better go through the usual
    procedure. So I'm going to ask you to begin by
    confirming that you are alone in the room from which
    you're giving evidence.
THE WITNESS: (Interpreted): I can confirm that.
SIR MARTIN MOORE-BICK: Can you confirm that you have no
    documents or other materials in the room with you?
THE WITNESS: (Interpreted): I can confirm that also.
SIR MARTIN MOORE-BICK: Thank you.
    Can you confirm, please, that your mobile phone is
    in another room and that you have no other electronic
    device with you which is capable of receiving messages?
THE WITNESS: (Interpreted): I can confirm that.
SIR MARTIN MOORE-BICK: Good, thank you very much.
            Well, the procedure will be the same as it was
    yesterday. We shall have a break during the morning at
    round about 11.15, but if you feel you need a break at
    any other time, please indicate that.
THE WITNESS: (Interpreted): Thank you.
SIR MARTIN MOORE-BICK: Is there anything you would like to
    raise or to ask me before we carry on?
THE WITNESS: (Interpreted): No, not at all.
SIR MARTIN MOORE-BICK: Thank you.
    Well, in that case, I'll invite Mr Millett to
```

continue his questioning.
Yes, Mr Millett.
Questions from COUNSEL TO THE INQUIRY (continued)
MR MILLETT: Mr Chairman. Good morning, Mr Chairman, good morning, members of the panel, and good morning, Mr Schmidt.

Mr Schmidt, I would like to begin this morning by asking you about one further European Standard fire test in 2006. This is the 2006 Reynobond FR rivet test.

Can we please go to $\{$ BBA00008288\}. In the French,
that is $\left\{A R C \_T 000017\right\}$. If we can have both of those up,
thank you very much. You will see the English on the left and the French on the right.

This is the reaction to fire classification report number RA06-0372 under European Standard NF EN 13501-1.
If you look at that first page there, you can see that the commercial brand tested was Reynobond FR, the date of issue was 19 October 2006, and the report was valid for five years from that date.

Can we go to page 2, please, in both versions \{BBA00008288/2\} \{ARC_T000017/2\}. You can see there, under "Product description":
"Composite panel consisting of two precoated aluminium sheets thermally bonded on either side of a polyethylene core.

## 3

"Tested system: riveted on metal substructure."
Then you go on to see that it says that the finishing coat was Duragloss 5000, 35 microns, and the colour was "gold-coloured". Do you see that?

If you go to page 4, please, in both versions
\{BBA00008288/4\} \{ARC_T000017/4\}, and look at the bottom of the page, you will see two signatures of the officials at the CSTB with a date above it, 19 October 2006, and if you go a little bit higher up the page on each version, if the operator could just scroll upwards, we can see the classifications there under paragraph 4.2 in the box:
"Fire behaviour: B.
"Smoke production: s1.
"Flaming droplets or debris: d0.
" Classification: B-s1, d0."
Do you see that?
A. (Interpreted): Yes.
Q. Thank you.

Then under section 4.3, "Field of application", it says:
"This classification is valid for the following product parameters."

They're there set out.
Then underneath that:
Q. "With a minimum air gap of 20 mm ."
Now, I've shown you this certificate or report of
classification ; did you see this document at the time,
or once you became managing director in 2007 ?
A. (Interpreted): No, I don't think so.
Q. Have you ever seen it before today, when I'm showing it
to you?
A. (Interpreted): I believe I never saw it before.
Q. So do we take it that when you were preparing your
witness statements you were not shown this test report?
A. (Interpreted): No, I don't think so, no.
Q. Now, as far as we, the Inquiry, has been able to tell
from the records, Arconic did not do another test on PE
core, but instead chose to perform a test on FR core,
and this is the report.
My question is: do you know why Arconic did not do
another test on PE core but only FR core?
A. (Interpreted): I don't think that was the question --
was there a direct question in this?
5
Q. There was. I' ll put it: do you know why Arconic did not
do another test on PE core but only on FR core?
A. (Interpreted): No.
Q. Now, this test, as you can see, was rivet-fix; do you
know whether Arconic performed a test on Reynobond FR in
cassette-fix?
A. (Interpreted): No.
Q. You can see that this test was set up with an air gap of
20 millimetres. We saw yesterday that the air gap in
test 5A for PE core was 50 millimetres. Do you know why
there was a difference?
A. (Interpreted): I mean, what I've just seen on this document you've just showed me is that the gap, the air gap, is a minimum of 20 millimetres, so $I$ don't know if the air gap was effectively 20 millimetres or something else. And if they had decided to stick to an air gap of 20 millimetres, I don't know at all why.
Q. I'm now going to turn to a different topic, which is the decision to obtain a BBA certificate for the UK market. It's specifically for Reynobond 55.

Can we start by looking at Mr Wehrle's statement, please, English \{MET00053190/22\}, paragraph 72, in the French, \{MET00048342/28\}, paragraph 72 again. I want just to put to you, show you, the first sentence of that paragraph.

If you read that in the French, I' II read it out in the English. He says:
"Many of the certifications, like the
BBA certificate are largely obtained for marketing purposes, and hence I am reliant on colleagues in the overseas sales teams to decide why (if any)
certifications they wish to be obtained in order to be better able to sell the products."
A. (Interpreted): Yes.
Q. To the best of your understanding, was that the purpose of the BBA certificates?
A. (Interpreted): Yes.
Q. Is it right that a salesperson in a particular region would usually propose that Arconic should get specific certifications?
A. (Interpreted): Yes.
Q. And is the reason for that that the specific
certifications would help that salesperson sell the product in that particular region?
A. (Interpreted): Yes.
Q. So does that mean that, in the UK, Arconic was dependent upon the UK sales team for being told what certifications were necessary to assist sales in the UK?
A. (Interpreted): Yes, I think so.
Q. And is it right that before the end of 2007 that was

## 7

Colin Southgate, and then after that Deborah French, and then after her, Vince Meakins, for Reynobond 55?
A. (Interpreted): Yes.
Q. Now, it's right, is it not - - and if you don't know, tell me -- that Arconic had a BBA certificate for Reynolux in about 1987?
A. (Interpreted ): I'm sorry, sir, did you say 1987 or 1997 ?
Q. 1987.
A. (Interpreted): Yes.
Q. In your role involved in the production of Reynolux in the late 1990s, you were aware of the existence and role of the BBA; yes?
A. (Interpreted): Yes.
Q. Can we take it that you were broadly aware of what a BBA certificate was?
A. (Interpreted): Yes.
Q. And you were broadly aware of why Arconic might want a BBA certificate for one of its products?
A. (Interpreted): Yes.
Q. Am I right in thinking that you thought that the BBA, when preparing their certificate, would be painstaking and thorough?
A. (Interpreted): Yes.
Q. And that you thought the BBA would be diligent in assessing Arconic's products for certification ?
A. (Interpreted): Yes.
Q. Now, I want to ask you, against that background, about Arconic's BBA application in August 2006. So this is
a year before you became managing director at Merxheim.
My first question is a general one: were you
involved at all at the time -- August $2006-$ - in
Arconic's decision to submit an application form to the BBA?
A. (Interpreted): No.

Well, as I said yesterday, in 2005/2006 I was busy preparing an MBA, so I used to spend a lot of time outside the company, but when I was there, in parallel, I was responsible for the launch of a new plant in China.
Q. I understand.

Well, I'm going to show you a document, and if you can't help me with it, then we can take it quickly.

Can you please go to the application form which Claude Wehrle has exhibited, and I just want to start with $\{$ MET00053158_P13/167\}, English version, French version, please, \{ARC_T000022/1\}. Thank you.

Now, this is the cover page of the application. Is this a document that you have ever seen before, do you think?
A. (Interpreted): I believe I saw it on Monday, when you
put the document online. But l'd never seen it before.
Q. Right.

Now, I'm going to ask you one or two questions about it in some detail and see if you can help us with it.
Can we please go to page 169 in the English
\{MET00053158_P13/169\}, page 4 in the French \{ARC_T000022/3\}.

Now, it says here under section 1, you can see it:
"Product name: REYNOBOND 55."
Do you see that?
A. Oui.
Q. "Description of proposed use:
"REYNOBOND is used in architecture for: Ventilated facades, Infill for curtain walls, Cladding, roof construction and rims."

Then underneath that it says, paragraph 1.3:
"Description of claimed performance level ...
"Fire classification: BS 476 Part 6: Fire propagation index $=1.0-$ BS 476 Part 7: class 1 (Warrington fire research reports 132316 and 132317)." A. (Interpreted): Yes.
Q. Those reports, I think I showed you yesterday, the ones dated 12 September 2003, were for Reynobond 55 FR; do you remember that?
A. (Interpreted): Yes.
Q. Just so that everybody can check, the references to those are $\{$ BBA00000053 $\}$ and $\{$ BBA00000050 , and for those in the French, just in case it's necessary to check
them, $\{$ ARC_T000016 $\}$ and $\{$ ARC_T000015 \}. I've given you those references.

Can we go to page 171 in the English
\{MET00053158_P13/171\} and page 5 in the French
\{ARC_T000022/5\}. Here you can see under section 2.1 it says:
"Please describe your Product and Product range."
Then it says, please follow in the French:
"REYNOBOND is a composite panel made out of two aluminium sheets (thickness 0.5 mm ) pre-coated and thermally bonded to each side of a polyethylene core. Please see attached literature and drawings for this description.
"As you can see, there are different thicknesses: 3, 4, and 6 mm and two different cores PE and FR (Fire Retardant)."

Let's look at page 173, then, in the English \{MET00053158_P13/173\}, page 7 in the French \{ARC_T000022/7\}. Here is a list of certificates, and in the penultimate box you can see under the list there is a test for fire propagation, and there are the same Warrington Fire Research tests, 132316 and 132317, that

## 11

were referred to before, which are FR. Do you see that?
Then if we go to page 176 in the English
\{MET00053158_P13/176\} and page 10 in the French \{ARC_T000022/10\}, we can see that here is the signature page. Claude Wehrle signs it on behalf of AAP, as the technical manager for Reynobond, and the date is 9 March 2004.

I don't think you' II be able to help us with the date, but the Inquiry's inference is that that's hangover date from an earlier application form that was filled in in 2004 by Mr Wehrle, but was then halted, he said, for commercial reasons, and he has explained that in his witness statement. So that explains the date.

My questions for you are: I've shown you the application form in part; on what l've shown you, do you accept that it's made very clearly on the basis that Reynobond can have either a PE core or an FR core?
A. (Interpreted): Yes.
Q. But, as we've seen, do you accept, just on this document, that the fire performance claimed in this application is only as to the FR core?
A. (Interpreted): Yes.
Q. Are you able to explain why that is?
A. (Interpreted): No.
Q. Are you able to explain why this application form does
Q. Do you agree with me that this application form contained or identified no class 0 test or PE-core Reynobond 55 at all?
A. (Interpreted): Yes, if the references correspond to the tests that you showed me yesterday, then that's what I can note.
Q. So do you agree with me that, at least at this stage, August 2006, the BBA was given no evidence that Reynobond 55 PE core had been subjected to and passed
a British Standard test leading to a class 0
classification ?
A. (Interpreted): But you're talking about a document of 2004.
Q. Well, this document was re-compiled in 2006.
A. (Interpreted): Was it identical to this one?
Q. Well, I'm asking you. I think you're not familiar with it. I'm putting to you what this document shows, and I'm just inviting you to agree - - I'll try it one more time -- that this document made no reference and provided no evidence that Reynobond 55 PE core had been subjected to and passed a British Standard test leading to a class 0 classification.
A. (Interpreted): Yes, but I again don't understand, [ FT $]^{* * *}$ because there was a document that was drawn up in 2004 and there was no follow-up and then another document was probably drawn up in 2006. ***
Q. And I think you can't help us with any of that, can you?
A. (Interpreted): For sure, I wasn't involved at all.
Q. So that would be Mr Wehrle who would have to answer those questions, is it?
A. (Interpreted): Probably.
Q. Let's then look on a little bit later in 2006 and look into Mr Wehrle's witness statement, English version \{MET00053190/46\}, paragraph 166, French version \{MET00048329/21\}, paragraph 166.

He refers at paragraph 166 to a meeting in November 2006, and he sets out his reasons here about why Arconic wanted the product and not the system certified by the BBA. This meeting, I'm assuming, is one that you were not at. It was a meeting in Watford in the UK with the BBA.
A. (Interpreted ): Then for sure I wasn't $--I$ didn't attend it .
Q. No. I'm just going to ask you a general point about what he says about it.
He says:
"At the 2 November 2006 meeting, a discussion also
took place regarding the scope of the BBA certificate for Reynobond. AAP SAS's view was that the material (i.e. the Reynobond product) should be validated rather than the system into which the product would be integrated. This was the only basis on which AAP SAS could work, as it would not know in which type of system its product would be used, what materials it would be used with, etc ..."
(Pause for translation)
Yes, I just wanted him to follow the French.
THE INTERPRETER: Sorry, I apologise.
MR MILLETT: Okay. What I'm going to do is read out the English, and he can follow in the French.

Now, my questions, having shown you this paragraph of Mr Wehrle's witness statement, Mr Schmidt, are these:
first, do you agree that Arconic knew that Reynobond 55 could only be used if fabricated?
A. (Interpreted ): What do you mean by if fabricated, transformed?
Q. Fabricated, shaped.
A. (Interpreted): Transformed, then?
Q. Do you agree?
A. (Interpreted): Yes.
Q. Therefore do you agree that Arconic knew that customers would buy Reynobond 55 to fix either in rivet form or in

15
cassette form?
A. (Interpreted): Yes.
Q. Now, we saw yesterday test 5B on the cassette form of Reynobond 55 PE variant. Do you know why Arconic thought it was appropriate for the BBA to certify the product when you knew, or Arconic knew, that in one of the two forms in which it would be fabricated and used, namely cassette, it had performed so disastrously that it could not be classified under the European norm?
A. (Interpreted): And the basic question is: do I know why? No.
Q. Do you accept that any certificate that allowed the reader to believe that the product performed the same in a fire whether it was rivet-fix or cassette-fix would be misleading?
(Pause)
A. (Interpreted): Yes.
Q. Yes, thank you.

Do you agree that Mr Wehrle's explanation for asking the BBA to certify the material, namely that Arconic would not know into which type of system its product would be used, was unfounded?
(Pause)
A. (Interpreted): No, let's say what I imagine at the time in 2006, the need for the English market was to have
a class 0 product and that was sufficient information to be able to use it on a façade. I also take into consideration the other variants on the façade.
Q. Do you agree that not knowing what overall system the panels would be used for does not excuse concealing the fire differences, the differences in fire performance, as between rivet and cassette?
A. (Interpreted): No, I don't accept that. I can't really answer that question, but I don't think there was a desire to hide anything whatsoever. And once again, I wasn't involved, so I have difficulty in answering that type of question.
Q. Mr Schmidt, in your last answer you said you don't think there was a desire to hide anything whatsoever. If that is so, please explain to me why the BBA certificate does not draw a distinction in fire performance between rivet and cassette.
A. (Interpreted): No.
Q. No, what? No, you won't explain or no, you can't explain?
A. (Interpreted): No, I can't.
Q. Can I look now into March 2007, and again, to be fair to you, this is a number of months before you took over as managing director at Merxheim. I want to look at the BBA contract, the contract between the BBA and Arconic.

## 17

Can we please have in the English version
\{BBA00008042\}, please, and in the French \{ARC_T000004\}.
We have both on the screen, the English on the left, the French on the right.

Again, can I ask you, Mr Schmidt, is this a document that you saw at the time, maybe, March 2007?
A. (Interpreted): No, I don't believe so.
Q. Have you ever seen this document before today?
A. (Interpreted): Yes, on Monday.

In fact, I think that the previous document which was dated 2004 relating to BBA, I think that actually that document I had never seen.
Q. Very well. So do we take it that you hadn't seen either that document or this document, the certificate contract, when you did your witness statement?
A. (Interpreted): No.
Q. Did you not want, when you were doing your witness statement, to know what the formal legal relationship was between Arconic and the BBA?
A. (Interpreted): No, when I prepared my witness statement I answered specific questions and I gathered together all the documents that related to those questions.
Q. You didn't trouble yourself to ask yourself, even, let alone your lawyers, what the precise legal relationship was between Arconic and the BBA; is that right?
A. (Interpreted ): I didn't ask my lawyers the question.
Q. Now, this is in the BBA technical file forming part of the Inquiry's documentation and the disclosure. Do you know whether anybody at board level in Arconic authorised the entry into this contract?
A. (Interpreted): When you're talking about board level, do you mean Alcoa's board, right at the top?
Q. Well, the board or directorial level at AAP-SAS.
A. (Interpreted): Well, I think that document was signed by -- I think I can see, in fact, the initials of $C R$, Claude Ritter, who was assistant managing director at the time.
Q. Okay, Claude Ritter?
A. Oui.
(Interpreted): $\mathrm{R}-\mathrm{I}-\mathrm{T}-\mathrm{T}-\mathrm{E}-\mathrm{R}$.
Q. I see. And he was assistant managing director at the time; who was he assisting?
A. (Interpreted): Claude Brichet, who was the managing director.
Q. Would you please spell his name?
A. (Interpreted): $\mathrm{B}-\mathrm{R}-\mathrm{I}-\mathrm{C}-\mathrm{H}-\mathrm{E}-\mathrm{T}$.
Q. Thank you.

Was Claude Brichet your predecessor in the role of managing director?
A. (Interpreted): Yes.

## 19

Q. When you took over your role as managing director from Claude Brichet in August 2007, do you remember whether he gave you any formal or even informal handover?
A. (Interpreted): It lasted approximately one week during July, because I was involved in the project in China until the end of June. I remember the month of June very clearly because I presented the project to the Alcoa management, and the project was aborted, so that's why I remember it clearly.
Q. Right.

When you had this week of discussions, did Mr Brichet introduce you to the products that were being manufactured at and sold from Merxheim?
A. (Interpreted): No.
Q. So, to be clear, he never gave you any introduction to Reynobond 55?
A. (Interpreted): No, not specifically. But I had been at Merxheim since the beginning of the production, so I didn't think it was necessary.
Q. Did Mr Brichet give you a package of up-to-date documents relating to Reynobond 55?
A. (Interpreted): No.
Q. Did Mr Brichet tell you that Arconic had entered into
a formal legal contract with the BBA?
A. (Interpreted ): No. I don't believe so. I don't think
so.
Q. Did Mr Brichet tell you that Arconic had been talking to
the BBA about obtaining a BBA certification for
Reynobond 55 ?
A. (Interpreted): No, I don't believe so. No, I think that
they considered that as being part of the current
affairs and normal current developments.
Q. Did Mr Brichet leave you behind a set of files or
documents, whether electronic or in paper form, so that
you could take on where he left off?
A. (Interpreted): I don't remember. I don't believe so.
Maybe. Maybe one or two documents, but it was really
very restricted. I think that he believed that the
handover should be as short as possible, so that there
wouldn't be two people having the same role at the same
time with different management ideas.
Q. When you say two people having the same role at the same
time, do we understand from that that you and Mr Brichet
shared the role of managing director for a period?
A. (Interpreted): No. No, officially he finished at the
end of July and I began at the beginning of August.
Q. So how could you have two people having the same role at
the same time?
A. (Interpreted): That's not what I wanted to express,
that's not what I wanted to say.

## 21

## Q. What did you want to say?

A. (Interpreted): Well, when people are replaced in a company, sometimes some companies choose to have them double up over a number of months, but in this case the announcement that I was going to take over took place between 1 and 15 July, and then I took over in August.
Q. Now, looking at the document, page 1 \{BBA00008042/1\} \{ARC_T000004/1\}, if we can just go back to that, please,
it says "Certificate contract", and we can see
a reference number at the very top of the page,
"Reference No S3/41014".
A. (Interpreted): Yes.
Q. Dated 22 August 2006, but it looks like it was signed in 2007. We can see a price, do you see, of -- I think you can see a price a little bit lower down, we have to go ... if you go to the bottom of the page, the price there is $£ 16,527$ sterling; do you see that?
A. (Interpreted): Yes.
Q. And the specified use, immediately above that, do you see, it says:
"As defined in Clause 1.3 'Use' of Assessment Specification S3/41014 dated 22 August 2006."
A. (Interpreted): Yes.
Q. We saw that before, the application form.

Now if we go to section II, please, above that,
a third of the way down the page, "The Subject", do you see? It says:
"Nature of product or process:
Aluminium/polyethylene composite wall cladding ..."
Then "system" was typed in, crossed out, and somebody has written in manuscript "panels". Are you able to explain why the word "system" was deleted and "panels" substituted?
A. (Interpreted): No.
Q. Now, you identified, I think, the signatures. Apart from Mr Ritter, are there any other signatures or initials on this page that you can help us with?
A. (Interpreted ): No, I don't know them. I can see that there's twice the same signature, but I don't really know it, and there is a signature by the word "panels", but I can't identify it either. They could also be signatures from people from BBA also.
Q. Okay.

You mentioned Claude Ritter. Just point out on the page where you see his signature or initial. Is that it at the bottom?
A. (Interpreted): No, I can't see his signature, all I see is his initials, CR.
Q. And that's Claude Ritter, is it, to be clear?
A. (Interpreted): Yes, I think it means Claude Ritter, and

## 23

I think it may be his handwriting.
Q. Thank you.

Can we go to page 2, please, in the English
\{BBA00008042/2\}, page 2 in the French also
\{ARC_T000004/2\}. Here we see the certificate terms and conditions.

If we scroll to the bottom of the page, please, in the English, and indeed the French, we see again the initials CR as well.

If we go to page 4 , please, in both versions \{BBA00008042/4\} \{ARC_T000004/4\}, we can see that this contract or these conditions have been signed and scratched on 21 February 2007. You see that?
A. Oui.
Q. Can you identify the signature in the signature box next to the words "Signed on behalf of the Applicant"?
A. (Interpreted): That's Claude Ritter, indeed.
Q. Thank you.

Now, let's see page 3, please, in both versions
\{BBA00008042/3\} \{ARC_T000004/3\}. I'm going to look
a little bit more closely with you, Mr Schmidt, at one or two of the terms and conditions of this contract. All right?
A. (Interpreted): Yes.
Q. If you look on the left - hand side of the page in each
case, the left - hand column, you will see clause 7 or
section 7, which in English reads "Other obligations of the applicant"; do you see that?
A. (Interpreted): Yes, I can see that.
Q. It says, "The Applicant shall", and then I want to show you two subsections here, (a) and (g).
(a) says - - and if you follow in the French, I' II read it in the English:
"(a) disclose to the BBA full particulars of and relating to the Subject including (but without prejudice to the generality of the foregoing) particulars of its physical or chemical composition, of any process or method of manufacture thereof, of the control of the quality of the composition or manufacture thereof, of any test data already available and of the test procedures used to obtain the same provided that the BBA will not include in the Certificate, any details of the composition or method of manufacture of the Subject save such as shall be mutually agreed between the Applicant and the BBA."

Before I leave that subparagraph, I just want to focus your eyes on the words "of any test data already available". Do you see that there?
A. (Interpreted): Yes.
Q. Then if we look at $(g)$ together, which is towards the

25
bottom of the page in each case -- and again, I will read out the English and please read to yourself in French -- it says:
"(g) immediately notify the BBA of any change in the particulars supplied to the BBA or any third parties and also of any new or additional information concerning the Subject or its suitability for the Specified Use including, without limitation to the generality of the foregoing, details of claims by users of the Subject that it is or may be unsatisfactory for the Specified Use ..."

I just pick up with you the definition of "Specified Use", please, on page 2 of this document $\{$ BBA00008042/2\} \{ARC_T000004/2\}, which you will see on this page, on the left - hand side, and it may have to be blown up so that you can see it under paragraph $1(\mathrm{~d})$ under the
definitions clause. Also if one could enlarge the French too. Thank you.

It says under $1(\mathrm{~d})$ :
"'Specified Use' - the use specified on the front page in respect of which (but of no other) the Subject will be assessed by the BBA hereunder."

Then if we go to the foot of page 3 \{BBA00008042/3\}
\{ARC_T000004/3\}, we can see clause 12, please, right - hand column at the foot of the page. Let's read
aloud in English, to yourself in French, please:
"Expiry of the Certificate.
"The Certificate will expire on the Expiry Date if:
"(a) the Applicant has not entered into a contract with the BBA for a review of the Subject and paid the Fee required under that contract on or before the Expiry Date; or
"(b) the BBA has not, in writing, extended the validity of the Certificate."

Then if we go up to page 2 of this document \{BBA00008042/2\} \{ARC_T000004/2\}, the definition of "Expiry Date" under clause $1(1)$, please:
"... the date specified in the Appendix for the Review of the Certificate or, if no such date is specified, three years from the date of issue of the Certificate or, if an extension of validity has been granted, the date specified by the BBA."

Now, I've shown you quite a lot of this contract, Mr Schmidt. I have a number of questions for you, and again, if you can help me, very good, and if you can't because you don't know, please say so.

Now, before I ask my first question, I just want to put back in front of you clause 7(a) and just remind you again of the words in there I want to ask you about. Page 3 \{BBA00008042/3\} \{ARC_T000004/3\}. It's the words

## 27

"any test data already available" which I wanted you to focus on, just to remind you there that the applicant shall disclose any test data already available.

Now, I want to show you what Mr Wehrle says in his witness statement, English version $\{$ MET00053190/17\} at paragraph 59, French version $\{$ MET00048342/21\}, paragraph 59, if we could please have those. Let's look and see what he says.

Halfway through the paragraph in English he says "I am not aware of the detail". If you could read that paragraph from there to the end of the paragraph to yourself. I'II read it out in English. He says:
"I am not aware of the detail of the contracts between AAP SAS and the BBA. Over time, Colin Southgate, myself and Nicolas Remy have received BBA contract documentation, but as I organised the certifications in numerous countries I did not know all the contractual details relating to such. I rely on the relevant certification body to let me know what information it requires in order to undertake its assessment process. I also have every confidence in the on-going audit processes that the certification bodies conduct."

Now --
THE INTERPRETER: Sorry, sir, the bottom of the text is not

```
        presented. Thank you.
            (Pause)
A. (Interpreted): Yes.
MR MILLETT: Right.
            Now, my first question for you, Mr Schmidt, is: was
        it not Claude Wehrle's responsibility to understand what
        Arconic's contractual obligations to the BBA were?
A. (Interpreted): Yes, I think in that case, yes.
Q. And do you agree that it was Claude Wehrle's job to make
        sure that Arconic complied with its obligations to the
        BBA?
A. (Interpreted): Yes, him directly or his team.
Q. And that would include, wouldn't it, the obligation to
        give all particulars of all test data available to the
        BBA; yes?
A. (Interpreted): Yes.
MR MILLETT: Thank you.
            Mr Chairman, is that a convenient moment? We've
        come to a fairly naturally break, but it's as good
        a time as any.
SIR MARTIN MOORE-BICK: If it suits you. I wasn't going to
        interrupt you in case you had a run of questions that
        all really hang together, but if it suits you to stop at
        that point, I think it would be sensible to do so.
            Right, well, as you heard from that exchange,
                29
    Mr Schmidt, we are going to have a short break now. We
    shall resume your evidence, please, at 11.35. Please
    remember not to talk to anyone about your evidence.
    All right?
        Good, thank you. 11.35, then.
(11.17 am)
(A short break)
(11.35 am)
SIR MARTIN MOORE-BICK: Welcome back, everyone. We are now
    ready to resume taking Mr Schmidt's evidence. I'll just
    begin by checking that the interpreters are with us?
MS KENNEDY: Yes, we are with you.
SIR MARTIN MOORE-BICK: Good, thank you very much, and check
    that Mr Schmidt is there and he can hear me and see me
    well?
THE WITNESS: (Interpreted): Yes, I'm there.
SIR MARTIN MOORE-BICK: Good. Hello, Mr Schmidt, again.
        If you're ready, I'm going to invite Mr Millett to
    put some more questions to you.
        Yes, Mr Millett.
MR MILLETT: Thank you, Mr Chairman.
            Mr Schmidt, I now want to turn to the information
        that Arconic sent to the BBA to support its application
        for certification
            Now, let's go, please, to the subject of the test
```

reports. We've seen before, and do you accept, that Arconic provided the British Standard 476-6 and 7 tests for the FR core from 2003 to the BBA?
A. (Interpreted): Yes.
Q. Now, we've seen no evidence from the records that Arconic provided the BBA with either the 1997 test certificates or report on Reynobond PE 160, or any of the 2006 reports on the Reynobond 33 signage product.

My question is: have you seen any evidence that Arconic provided those certificates or reports to the BBA?
A. (Interpreted): No. Not to my knowledge. I don't know.
Q. I would suggest to you that the reason why none of those reports were provided to the BBA is because they were not relevant. Do you agree?
A. (Interpreted): As far as the 2006 RB 33, yes, but I think that the 1997 report could have been submitted. But it's true that production took place in the United States.
Q. Yes.

Now, we know that the BBA was provided with the classification report under EN 13501 for the PE in riveted form relating to test 5A; we know that. We also know that the BBA was provided with the classification report under EN 13501 for the Reynobond 55 with FR core;

## 31

we know that.
Now, Arconic did not provide the BBA with any documents relating to test 5 B , the test conducted in December 2004 on the cassette-fix variant of Reynobond 55 PE. Do you know why not?
A. (Interpreted): No.
Q. Do you agree that the BBA should have been sent the documents pertaining to test $5 B$ ?
(Pause)
A. (Interpreted): Yes.
Q. Thank you.

Mr Wehrle, in his witness statement, provides a number of reasons why test 5 B was not provided to the BBA, and I want to examine them with you and see if you agree with them.

Can we begin, please, with Mr Wehrle's witness statement at page 48 in the English \{MET00053190/48\}, paragraph 177, and page 24 in the French, please, \{MET00048329/24\}, again, paragraph 177. That isn't the right page, it 's coming up, I think.

Now, I'll read it in English aloud, and I'd like you to read, please, in the French to yourself, Mr Schmidt. I'm going to read the whole paragraph to you, but what I want you to focus on in this paragraph is the last six lines. He says:

SIR MARTIN MOORE-BICK: Well, let the interpreter just interpret your run-up to the question, please.
MR MILLETT: I'll put it again, Mr Chairman, so she can translate it.

We saw, before the break, that the terms and
conditions of Arconic's contract with the BBA required Arconic to provide any test data available. Do you remember that?
A. (Interpreted): Yes.
Q. Do you accept that test 5B was test data in relation to the cassette system?
A. (Interpreted): Yes.
Q. Would it follow that Arconic was legally obliged to provide the available test data, test 5 B , to the BBA?
A. (Interpreted): Yes, probably.
Q. Now, the BBA technical file is very large. We have seen no evidence in there that anybody at Arconic mentioned the existence of test $5 B$ on cassette to the BBA. If we're right about that, do you know why not?
A. (Interpreted): No.
Q. We found no evidence that anyone in Arconic told the BBA that the fire performance of the cassette variant of
"As referred to at paragraph 54 above, an update was progress had been made in the assessment of Reynobond Architecture Cladding Panels, and that some further information was needed in order to complete the assessment. This included reaction to fire test data for the 'standard PE panel', as the BBA informed AAP SAS that the French classification as described in the Avis Technique was not recognised in the UK (this would have been a reference to the M classification system referred to in paragraphs 42 and 45 above). In response to this, on 25 May 2007, I provided the CSTB EN13501-1 classification report (reference number RA05-0005A) which related to the grey/green colour rivet testing (and in the field of application section of this report it confirms it is only valid for the rivet system) and sought confirmation from the BBA whether that was OK for their purposes, which they confirmed to be the case (exhibited at P2391). I do not recall the BBA ever requesting any additional fire test reports. I did not provide the test report for the cassette variant (RA05-0005B) as this was a single sample test report and not a valid classification report."

Now, we saw earlier, before the break, together that the terms and conditions of Arconic's contract with the

BBA required Arconic to provide any test data available.
Do you remember that? Do you accept that, is my question?

Reynobond 55 PE was different from the fire performance established by the test for rivet, test 5A. If we're right about that, do you know why not?
A. (Interpreted): No.
Q. Do you know, from your own knowledge, on the documents that you have seen, whether Arconic did tell the BBA
that the cassette-fix variant of Reynobond 55 PE had been tested under the European test system for fire separately from the rivet - fix variant?
A. (Interpreted): No.
Q. Do you accept that the BBA could not have known about either the existence of test $5 B$ or the fact that the cassette variant of Reynobond 55 PE performed so differently from rivet in a fire, unless Arconic had told the BBA?
A. (Interpreted): No, I don't accept that because I think that the BBA was in -- communicated with CSTB on a regular basis.
Q. So is your evidence that Arconic would not provide relevant test data to the BBA but would leave it to the BBA to ask the CSTB?
A. (Interpreted ): Well, no, according to the contract, as you explained previously, Arconic was supposed to inform BBA, but at the same time that information was public and so therefore that information could have been

## 35

obtained differently.
I would like to add that I don't know how the BBA audits were carried out on the site, but the information certainly was available and it could have been supplied if it had been requested.
Q. Let's look and see what Mr Wehrle says about that. He makes rather the same point. Can we look back in his statement, please, at English version, page 16 \{MET00053190/16\}, French version, page 19 \{MET00048342/19\}, in both cases paragraph 54. The English and the French together, thank you. Now, 54 goes over the page in the French, so when we get halfway through it, the page will have to be turned in the French.

In English it reads:
"As part of the application for the BBA certificate, the BBA on 15 May 2007 informed me that it required the reaction to fire test data for a standard PE panel, as they already had data for an FR panel. In reply, I sent them the relevant and relatively recent CSTB report RA05-0005A and the BBA immediately replied that this document was acceptable. I considered that the BBA would be able to identify the relevant test as having been conducted using a rivet system, and had no reason to doubt that if the BBA had felt it necessary to ask
so."

Did Arconic, to the best of your knowledge,
Mr Schmidt, regard it as up to the BBA to ask - -
SIR MARTIN MOORE-BICK: Mr Millett, I'm sorry to interrupt you, because something is not working properly with your sound. We are hearing you speaking in a very disjointed and drawn-out manner. I don't know whether you are a little too far from your microphone or whether there is some other problem on the line, but that last question was pretty unintelligible, so you may have to put it again.
MR MILLETT: Mr Chairman, I'm sorry about that. Can you hear me now?
SIR MARTIN MOORE-BICK: I can hear you at the moment perfectly satisfactorily.
MR MILLETT: Right. May we proceed, and then see how we go, and if it happens again I'll have to ask RTS to see what they can do. But I don't think I've changed anything.
SIR MARTIN MOORE-BICK: All right. Try the question again.
MR MILLETT: Mr Schmidt, I'm sorry about that, it seems to be a mechanical problem. Let me try again.

I was reading out paragraph 54 to you of Mr Wehrle's witness statement. Can we please have that up again. I'm not going to read it out again, I'm going to assume
that, because it's there on the screen, the panel and members of the public have seen what Mr Wehrle says there, and you will have read the French to yourself.

Can you confirm that you have read paragraph 54 to yourself in French, Mr Schmidt?
A. (Interpreted): Yes, but I'd like to have the second half.
Q. Right. I did ask for that to be shown to you. If that could be shown to you. Thank you. Read the second half to yourself, please.

## (Pause)

A. (In English): Okay.
Q. Now I want to just ask you to focus, please, on the last sentence of that paragraph, and particularly where Mr Wehrle says that he had no reason to doubt that if the BBA had felt it necessary to ask for any other system test reports they would have done so.

Now, my question is, and I'll ask it again: did Arconic regard it as up to the BBA to ask for the right test data and certificate rather than for Arconic to volunteer it?
A. (Interpreted ): According to the document I saw previously, the Arconic contract should have supplied them. So, from experience, when I had the BBA audits in the 1990s on the precoated Reynolux product, the audits
used to take place once or twice a year, and we exchanged on -- with the auditor with regard to any changes that may have taken place in the previous period. So therefore we worked jointly or together.
Q. When Mr Wehrle says that "if the BBA had felt it necessary to ask for any other system test reports they would have done so", how does that reconcile, how is that consistent, with clause $7(a)$ of the BBA contract we saw?
A. (Interpreted): No, according to the contract, you're right, it should have come from us, indeed.
Q. How would the BBA know whether to ask for the separate test results for PE in cassette form if Arconic did not tell them that it had done one?
A. (Interpreted): Once again, if I compare with my own experience with Reynolux, I mean, when we had a BBA audit for Reynolux products, at the end of the audit the auditors would ask us whether there had been any changes in the product, in the process, whether we had anything to add. And if we're in the situation of an audit, I would imagine that the auditor could very well have [ FT ] ${ }^{* * *}$ asked, "What are all the elements you have at your disposal regarding fire testing?" ***
Q. Assuming that that was the process here, can you explain why, if that question had been asked by the BBA, Arconic

## 39

did not volunteer test 5B at that point?
A. (Interpreted): [FT ] ${ }^{* * *}$ I believe we would have talked about it. I believe -- well -- I mean, it's very difficult to talk about this ***, and I don't know really how to express it, but the first thing is that I didn't attend an audit with BBA in the years 2005 to 2015, so I don't know exactly how it happened and how it worked, but I believe that if the auditors had asked questions, it would have got the answers.
Q. Why would Arconic have left it to the BBA to discover the existence of test 5B through the audit process, rather than simply volunteering that test data in accordance with its contractual obligations?
A. (Interpreted): Well, I can't answer this question and I can't put myself in the place of the person who was in contact with the BBA auditor.
Q. And who was that?
A. (Interpreted): I believe that probably was Claude Wehrle and Claude Wehrle's team, and probably somebody from quality assurance, but that person probably wouldn't be much au fait of fire testing.
Q. From Arconic's point of view, Mr Schmidt, is there a reason you can think of why Arconic would have preferred to leave it to the BBA to discover the existence of test $5 B$ rather than providing it in

```
accordance with its contractual obligations?
A. (Interpreted): No.
Q. So, as a matter of policy, unless Arconic told the BBA
    that the cassette variant of Reynobond 55 PE core
    performed differently in a fire from rivet, you were
    taking a chance, weren't you, on whether or not the BBA
    might eventually pick it up in an audit?
THE INTERPRETER: I've mentioned the word "chance" and
    "risk" and there is a question as to the validity of my
    translation.
MR MILLETT: I'll try the question again.
            Unless Arconic told the BBA that the cassette
    variant of Reynobond 55 PE core performed differently in
    a fire from rivet, Arconic was taking a chance on
    whether or not the BBA might later pick up that fact in
    an audit. Do you accept that Arconic was taking that
    chance?
A. (Interpreted): Yes, I think so, yes.
Q. Okay.
A. (Interpreted ): I have got a problem with that notion of
    running a risk or running - - having to be exposed by
    chance. I mean, it may be that's not the right word,
    but if that's true, something had never been mentioned
    on the subject, it could have been found out,
    discovered, during an audit.
```

        41
    Q. Let me try the question again, Mr Schmidt.
Why would Arconic risk the BBA missing the existence
of test $5 B$ and the difference in fire performance
between rivet and cassette, as opposed simply to telling
the BBA?
A. (Interpreted): I don't know how to answer this. I mean,
I don't know why at the start that test wasn't
mentioned. But it could have been found out,
discovered, during an audit.
Q. Can we look at the technical file at page 133, please,
which is $\{$ BBA00008042/133\}. Now, what I'm going to show
you, Mr Schmidt, is an extract from the English and
Welsh Approved Document B, forming part of the
Building Regulations in force at the time of the
Grenfell Tower project. This is called diagram 40 from
Approved Document B.
A. (Interpreted ): I don't know what that document is,
I don't think l've ever seen it. What is that document?
Q. I'm explaining it to you, Mr Schmidt, of course. You
have answered my first question, of course. But this is
diagram 40, forming part of Approved Document B, which
applies to buildings in England and Wales under the
Building Regulations and the related approved guidance.
Now, if we scroll down a little bit on the screen,
I want to show you paragraph e, "Any building", and

I know you have said you have never seen this before.
Can I just ask you: is there anybody in Arconic responsible for selling or marketing Reynobond PE 55 who should have been familiar with this document?
A. (Interpreted): No.
Q. Nobody at all?
A. (Interpreted): No, I don't think it would have been possible for us to understand all that. I mean, Reynobond was sold from Merxheim all over Europe, in all the European countries and in many other countries around the world, and it would have been perfectly impossible for us to understand all the legislations in the relevant countries.
Q. I thought that we had agreed, you had agreed with me, that the salesforce working in any particular region would have to have at least a basic understanding of what the local regulations required which related to what they could and couldn't sell. I thought you had agreed with me this morning about that.
A. (Interpreted): Yes.
Q. Let's look at this document. It says under e, "Any building", and you can see a geometric shape there which says, "Any dimension over 18 m ", and that's the shaded part of the building. If you look at the shaded box on the right - hand side there, it says:

## 43

"Class 0 (national class) or class $\mathrm{B}-\mathrm{s} 3$, d 2 or better (European class)."
A. (Interpreted): So are you saying that this document applied in 2006 when we applied for the BBA certificate?
Q. Yes.
A. (Interpreted): In that format?
Q. In substantially that format, so far as this page is concerned, so far as I'm told, yes.
A. (In English): Okay.
Q. Now, it's right, I think you've agreed, that Arconic, at the time that the BBA was assessing Reynobond for the purposes of the certificate that Arconic wanted, had test data showing that Reynobond 55 PE in cassette form did not have class B, but in fact had failed the European test completely.
A. (Interpreted): Yes.
Q. And therefore, is it not right that the test data from test 5B was extremely relevant to the BBA's assessment, because it showed that in cassette fabrication form, the product, Reynobond 55 PE, would fall far below the classification on this document?
A. (Interpreted): But on this document there's also the class 0 that's mentioned.
Q. Mr Schmidt, I'm asking you about the Euro classification. Do you accept that test 5B was
an extremely relevant and important piece of information for the BBA to know because it showed that, in cassette form, Reynobond 55 PE fell very far below the European classification demanded in this document?
A. (Interpreted): Yes.
Q. Do you know whether there was any discussion within Arconic about making test 5B available to any certification body?
A. (Interpreted): No.
Q. If Arconic had genuinely believed that test $5 B$ was, as Mr Wehrle describes it, a rogue result, an aberrant result, why not simply give that result to the BBA with the data and see whether the BBA agreed?
A. (Interpreted ): I don't know. I don't know, I can't answer your question.
Q. Do you accept, as the voice of Arconic, that not providing test $5 B$ to the BBA was a deliberate concealment of what Arconic knew to be the true position, namely that the cassette variant of Reynobond 55 PE performed disastrously in a fire?
A. (Interpreted ): No. When you say deliberate, that's too much.
Q. Well, was it an accident?
A. (Interpreted ): I mean, I can't reply, I can't answer and I can't give a qualification. I mean, I cannot know
what Claude Wehrle was thinking about or reasoning at the time.
Q. Maybe you can't, Mr Schmidt, but I'm asking you, as the managing director from 2007 and the president from 2009, from Arconic's point of view, do you accept as a company that the concealment of test 5B from the BBA was deliberate?
A. (Interpreted): No.
Q. So is this concealment of test 5B from the BBA conduct which Arconic even today condones?
A. (Interpreted): No.
Q. So what went wrong?
A. (Interpreted): Well, first, I mean, the people who were mandated to exchange with BBA on the subject, they probably didn't give the good information, the right information, and also, during all that period there must have been numerous audits, and no questions were asked [ FT ] ${ }^{* * *}$ about that otherwise they would have appeared. ${ }^{* * *}$
Q. Do you accept that in presenting the rivet test 5 A only to the BBA as representative of the fire performance of Reynobond 55 PE, Arconic was telling the BBA a misleading half truth?
A. (Interpreted): Yes, you can see it like that.
Q. Thank you.
A. (Interpreted): May I hear the question once again? Because it's long.
Q. I' II put it much more shortly: is the reason why Arconic kept test 5B from the BBA commercial?
A. (Interpreted): No, I don't know.
Q. Is that a "no" or is that "I don't know"?
A. (Interpreted): I don't know.
Q. Mr Schmidt, I'm now going to turn to the BBA certificate itself, and how it was created, if you can help me with that. We start in October 2007 with the working draft.

Now, at this time you were managing director at Merxheim, and confirm for me, please, if you would, that Reynobond 55 was a product in relation to which you had responsibility ; yes?
A. (Interpreted): Yes.
Q. Can we go to Claude Wehrle's exhibits, part 15, at \{MET00053158_P15/188\}. Now, I do not think we have a French version of this document. I'll be corrected about that, of course, if we do, and I' II show it to you.

Let's go through it slowly. We can see here an email to Claude Wehrle from Hamo Gregorian of the BBA on Monday, 22 October 2007.

What I'm going to do is read out to you and have Madam Translator translate the parts of the email I want
o show you.
We can see in the first paragraph he says:
"Dear Claude [that's Claude Wehrle]
"A copy of our proposed draft Certificate is attached."

Then skipping down to the fourth paragraph down, he says:
"In your response, please include the following:-
" - a suitable colour image for the front page, about
$10 \mathrm{~cm} \times 10 \mathrm{~cm}$, minimum 300 dpi resolution.
"- information relating to section 2 Delivery, storage and site handling.
" - any additional or missing information you may feel could be helpful to the user/specifier .
" - amendments to any data or statements which you may consider to be inaccurate."

Now, just pausing there, it 's correct, isn 't it, that those last two bullet points there are clear and specific requests to Arconic to check the draft for completeness and accuracy; yes?
A. (Interpreted): Yes.
Q. Would you have expected your team at Arconic to have pointed out any significant omissions or errors?
A. (Interpreted): Yes.
Q. Do you agree that test 5B would be helpful to the user

49

```
    or specifier?
A. (Interpreted): Yes.
Q. Do you agree that a user or specifier would not simply
    find test 5B useful, but in fact absolutely crucial
    safety information?
A. (Interpreted): Yes.
Q. In fact, life and death stuff, to be colloquial; do you
    agree?
A. (Interpreted): That's too strong.
Q. What's the right way of putting it?
            (Pause)
A. (Interpreted): For matters relating to safety, as you
    expressed in the previous question.
MR MILLETT: I'm getting a message that this is not a fair
    line of questioning, and I'm required to put the whole
    of the email to you. I'm very happy to do that.
            I'm}\mathrm{ going to show you the second and third
    paragraphs, which I didn't read to you. So, in fairness
    to you, we can look at it.
SIR MARTIN MOORE-BICK: Mr Millett, sorry to interrupt, may
    I suggest you just ask the interpreter to translate the
    whole of the email so that the witness gets the whole
    picture in context?
MR MILLETT: Yes, Mr Chairman, of course.
    Madam Interpreter, could you translate the whole of
```

the email from beginning to end, please.

> (Pause for translation)
A. (Interpreted): Yes.
Q. Now, I'm going to ask my questions again on this document.

It's clear, isn't it, that the last two bullet points in the big yellow paragraph on the screen in front of you, "any additional or missing information you may feel could be helpful to the user/specifier", are specific requests to Arconic to check the draft for completeness and accuracy; do you agree?
A. (Interpreted): Yes.
Q. And would you have expected your team at Arconic to have pointed out any significant omissions or errors?
A. (Interpreted): Yes.
Q. Do you agree that test 5B would be helpful to the user or specifier?
A. (Interpreted): Yes.
Q. Do you agree that a user or specifier would not simply find test 5B useful, but in fact absolutely crucial safety information?
A. (Interpreted): Yes.
Q. Potentially making the difference between life and death?
A. (Interpreted ): No. Well, once again, I don't agree.

## 51

Yes, it does have an impact on the flammability, but the English regulation that you showed me in the previous document referring to class 0 , it showed that the product could be used. So even if users or specifiers could use class 0 on the façade, it would depend on the system, and it would potentially be totally in agreement with the regulations.
Q. Can you explain why you agree with me that test $5 B$ would be absolutely crucial safety information, but not so crucial that it would make a difference between life and death, Mr Schmidt?
A. (Interpreted ): Well, when one talks about safety, one doesn't only refer to safety relating to people.
Q. I see. So crucial safety information for the protection of property but not life ; is that how you see it?
A. (Interpreted): Yes.
Q. Really?

Let's look at the certificate . Let's have on screen, please, the final BBA certificate as issued. This is \{BBA00000047\}. We have a French translation, Mr Schmidt, for you, and that's at \{ARC_T000012\}.

Now, on the left-hand side we have the by now familiar English version, and the, I imagine, much less familiar French translation of this. This, I should just tell you, Mr Schmidt, is an Arconic translation.
2
4
5
6
7
8
9


I would just like to ask you, first of all, some
You can see at the bottom the date is
14 January 2008; do you see that? I'm afraid in the
French you will have to go over to the second page to
see that \{ARC_T000012/2\}. At the very top of the second
page in the French and at the bottom of the first page
in English. Do you see that?
A. (Interpreted): Yes.
Q. My question is: at this time, January 2008, did you see this certificate?
A. (Interpreted): I don't know. I don't believe so.
Q. When do you think, to the best of your memory, you did first see this certificate?
A. (Interpreted): 2017.
Q. After the Grenfell Tower fire; yes? Okay. Let's see how far we go with it, then.
We can see if we go to the top of the first page
that it is a certificate in relation to "Reynobond
Architecture Wall Cladding Panels", we can see the dark blue band; yes?
A. (Interpreted): Yes.
Q. Then underneath that it says:
"Product scope and summary of certificate."
Do you see that?
53

```

\footnotetext{
A. (Interpreted): Yes.
Q. Under that it says:
"This Certificate of Confirmation relates to Reynobond Architecture Wall Cladding Panels ..."

If Mr Schmidt could read along in the French
version, which starts just under the lighter blue band there.
"This Certificate of Confirmation relates to
Reynobond Architecture Wall Cladding Panels,
aluminium/polyethylene composite panels used to provide
a decorative/protective façade over the external walls of buildings."

\section*{Do you see that?}

A little bit of the way down the page, it says, "Key factors assessed". It's towards the very bottom of your screen in the French version, and I would like, if it's possible, the French version to be raised up so that we scroll down. Do you see that? Do you see the heading "Key factors assessed"?
A. (Interpreted): Yes, fine.
Q. Underneath that it says, three down, "Behaviour in relation to fire". Now, it's in bold in the English, but it 's not that easy to find in the French, but it starts with the word "Comportement". If you read those words after the word "Comportement", and I'll read the

25
}
words "Behaviour in relation to fire", and it says in the English:
"In relation to the Building Regulations for reaction to fire, the panels may be regarded as having a Class 0 surface in England and Wales, and a 'low risk' material in Scotland (see section 6)."

In the French translation of that, the words "the panels may be regarded" is in the second line in that
little section. If Madam Translator could just point those words out, please.
(Pause for translation)
Yes, thank you.
A. (Interpreted): Yes.
Q. Now, just to be clear, the document was issued in English and the French version is a French translation of the English, isn't it? To be clear, it was never issued in French, was it?
A. (Interpreted): Yes, I don't know. If you say so.
Q. You don't know, all right.

If we go to page \(3\{B B A 00000047 / 3\}\left\{A R C \_T 000012 / 3\right\}\),
please, you can see at the bottom of this page in the English, and I'm afraid it's -- well, we can work with this.

I'm so sorry, let's stick with the bottom of the
French page and scroll back up in the English version,

\section*{55}
and if we go to the "Technical Specification", which is the last blue box in the French on that page, and the big blue box on the page on the left on the screen,
"Technical Specification". It says, if Mr Schmidt could just read along with me:
"1. Description.
"1.1. The Reynobond Architecture Wall Cladding Panels comprise two 0.5 mm thick aluminium alloy sheets ... bonded to either side of a core of low-density polyethylene (LDPE). The panels are available either plain edged (riveted system) or flanged (cassette system) to suit architectural requirements (see Figure 1). A Duragloss or PVDF coating available in various colours protects the exposed face. A polyester primer protects the unexposed face. The products are also available in a fire - retardant grade ..."

If you look at figure 1 below -- in the English it will have to be scrolled up a bit, and in the French version we're going to have to turn the page \{ARC_T000012/4\}, thank you. They're next to each other. If Mr Schmidt could look at the French while I look the English. You can see that there are diagrams of the two systems. The heading says:
"Figure 1. Reynobond Architecture panels and
```

    typical fixing systems."
    On the left there is the riveted system, and on the
    right is the cassette system. Can you see that?
    A. (Interpreted): Yes.
Q. Now, if we go to page 5 of the certificate in the
English {BBA00000047/5} and 6 in the French
{ARC_T000014/6}, we see section 6, "Behaviour in
relation to fire". Let's look at section 6.1. If
Mr Schmidt would read along in the French, I will go
with the English, and in the English it says, next to
6.1:
"A standard sample of the product, with a grey/green
Duragloss 5000 coating, when tested for reaction to
fire, achieved a classification of B-s2, d0 in
accordance with EN 13501-1:2002."
That's the European classification. It goes on:
"A fire retardant sample of the product, with
a gold-coloured Duragloss finish, when tested for
reaction to fire, achieved a classification B-s1, d0 in
accordance with EN 13501:2002."
Do you agree with me that the first reference there,
the standard sample, is a reference to Reynobond 55 with
a PE core?
A. (Interpreted): Yes.
Q. And that's a reference, isn't it, to the 2005 test A,

```

\section*{57}
test and classification, which related to Reynobond 55
PE rivet-fix, isn't it ?
A. (Interpreted): Yes, probably.
Q. And, as I've shown you in the second sentence of paragraph 6.1, there is a reference to the fire retardant sample of the product, with the gold-coloured Duragloss finish. That's a reference to the 2006 classification of Reynobond FR, isn't it? (Pause)
Yes?
A. (Interpreted): Yes.
Q. Then under paragraph 6.2 -- I'll read the English if you look at the French, please -- it says:
"A fire retardant sample of the product, with a metallic grey PVDF finish, when tested in accordance with BS 476-6:1989, achieved a fire propagation index
(I) of 0 and, when tested in accordance with BS 476-7:1997, achieved a Class 1 surface spread of flame."
A. (Interpreted): Yes.
Q. Just pausing there, that's a reference, isn't it, to the 2003 Warringtonfire tests on Reynobond FR core, isn't it?
A. (Interpreted): Yes, probably.

MR MILLETT: Now, Mr Chairman, I find myself plumb in the
middle of this certificate with quite a few questions to go on it, but it's now 1.01 pm . Having shown the witness 6.1 and 6.2 , I need to show him the whole of section 6 , particularly the section --
SIR MARTIN MOORE-BICK: Well, Mr Millett, I did realise that you were probably going to find yourself in this predicament, but I think that probably it would make sense, wouldn't it, to break at that point and come back with presumably a number of questions after we've had a break?
MR MILLETT: Yes. There is a logic to breaking here, and I would ask that we seize that.
SIR MARTIN MOORE-BICK: Yes. Well, I'm persuaded.
MR MILLETT: All right.
SIR MARTIN MOORE-BICK: Mr Schmidt, I think you understood
from what you heard, probably, that we're going to take
a break now for some lunch.
We will come back, please, at 2 o'clock UK time, and again I have to remind you, please, not to talk about your evidence over the break, to anyone at all.
All right?
See you at 2 o'clock, then. Thank you very much.
( 1.03 pm )
(The short adjournment)
\((2.00 \mathrm{pm})\)

SIR MARTIN MOORE-BICK: Welcome back, everyone. We are now
ready to continue hearing evidence from Mr Schmidt, but,
as always, I' II just begin by checking that the
interpreters are with us and that they can hear clearly.
MS DELAS-REISZ: We can hear you clearly and we are with
you.
SIR MARTIN MOORE-BICK: Thank you very much indeed.
Now, Mr Schmidt, you're back with us, I hope, are
you?
THE WITNESS: (Interpreted): Yes, and I can hear you.
SIR MARTIN MOORE-BICK: Hello, Mr Schmidt. And you're ready
to carry on, I hope?
THE WITNESS: (Interpreted): Yes.
SIR MARTIN MOORE-BICK: Good. Thank you very much.
Yes, Mr Millett.
MR MILLETT: Thank you, Mr Chairman.
Mr Schmidt, we were looking together at the
BBA certificate for Reynobond 55, if we can please go
back to that document, and I'd shown you some of this
document already and clauses 6.1 and 6.2 within section 6, "Behaviour in relation to fire".

Can we now look at section 6.3 together, and it says
this, and I' II read the English, if you can read along in the French:
"As a consequence of sections 6.1 and 6.2 , the
products may be regarded as having a Class 0 surface in
relation to the Approved Document B of The Building Regulations 2000 (as amended) (England and Wales) and Technical Booklet E of The Building Regulations
(Northern Ireland) 2000 (as amended) and a 'low risk' material is defined in Annex 2C and Annex 2E of The Building (Scotland) Regulations 2004 (as amended).
The unexposed side of the products may also be regarded as having a class 0 surface."

Just pausing there, do you remember -- maybe you don't -- that the statement about the unexposed side was a conclusion drawn from the Reynolux certificate? Do you know that?
A. (Interpreted): No, not at all.
Q. Looking at 6.4, it says:
"These performances may not be achieved by other colours of the product and the designations of a particular colour should be confirmed by:
"England and Wales - Test or assessment in accordance with Approved Document B, Appendix A, Clause 1."

Then there are further test standards referred to in relation to Scotland and Northern Ireland I don't think I need to read it to you.

Still on page 5 of the English version, and we're on
61
the right page of the French version, 6.5, it says:
"For resistance to fire, the performance of a wall incorporating the product, can only be determined by tests from a suitably accredited laboratory, and is not covered by this Certificate."
6.6:
"Cavity barriers should be incorporated behind the cladding, as required by the national Building
Regulations, but should not block essential ventilation
pathways. Particular attention should be paid to preventing the spread of fire from within a building breaching the cladding system through window and door openings."
A. (Interpreted): Yes.
Q. Now, I've taken you through the principal sections of the certificate so that you have it fresh in your mind, including, before the break, 6.1 and 6.2, Mr Schmidt.

I want now to show you -- so you have the text in your mind -- what Mr Wehrle says about this certificate. Just so that you know where I'm going with the questions, what I want to know is how some of the statements that I've shown you came to be on this certificate . Right?
A. (Interpreted): Yes.
Q. Let's go to Claude Wehrle's witness statement, English
page 16 \{MET00053190/16\}, French page 20
\{MET00048342/20\}, please, in both cases paragraph 55.
He says at paragraph 55:
"I cannot recall whether or to what extent I read through the content of the BBA certificate, but I was not aware until after the Grenfell Tower fire of the precise detail of its content."

I want to ask you about that.
First, Mr Schmidt, was it not Claude Wehrle's job to know what was in the BBA certificate?
A. (Interpreted ): Yes, it was for him or his team, yes.
Q. Was it his job to read through it, make sure every detail was correct, and approve it?
A. (Interpreted) : Well, if you think about a job description, I don't think we would go that far into details, but if you think about his task in general, his job in general, yes, I think it was for him to do it.
Q. His English was good enough to do that, was it?
A. (Interpreted): Yes.
Q. All right.

Now, let's look, then, at some of the
correspondence. Let's go to some of the correspondence at the time, and I want to show you an exhibit, exhibit 16 from Mr Wehrle's witness statement, \{MET00053158_P16/15\}.

63

Now, I should tell you while the document is being retrieved that there is no French translation of this. Therefore, I will ask the translator to translate the whole of the email to you, please.
(Pause for translation)
Now, I want just to read out the relevant part in English, but let me introduce the document in English. It 's an email from Mandy Osman to Claude Wehrle on Thursday, 22 November 2007, and this email, the second one down on the page, is to Mr Wehrle from GG Lines, in fact, and the first line of the email under the heading "Reynobond Architecture Wall Cladding Panels" says:
"We enclose a copy of the proposed Certificate for the above product and would appreciate your written approval of the draft."

And you have already translated the whole of it.
If we go to page 17 \{MET00053158_P16/17\}, please, we can see draft 1 of the BBA certificate was attached, and there it is.

We can then go to Claude Wehrle's response to this email. Can we please have the bottom of page 35 \{MET00053158_P16/35\} and the top of page 36 of this email. It's the email at the bottom of page 35 , on to page 36. I'm going to read it in English first aloud

\section*{THE INTERPRETER: Absolutely.}

MR MILLETT: It's from Claude Wehrle to Mandy Osman on
23 November 2007, copied to Hamo Gregorian, and it says: "Hello,
"I've some remarks:
"On 1. Description:
"After (see Figure 1), instead of 'A duragloss
coating ... a PVDF coating' can you write [and then in
red] 'a Duragloss or PvdF coating protects the exposed
face in many different colors to outside exposure. The
unexposed face is protected with a polyester primer.'"
Then in green someone has written, we can see in the later email:
"Text will be amended as advised."
Then under 1.3:
"Can you add the 2 dimensions \(2000 \times 3000\) and \(2000 \times\) 4000."

Then in green underneath that:
"Text will be amended as advised."
Then on 6.1, which we saw in total in its final
form:
"Can you add the results of our fire certification
for Reynobond FR ( \(B-s 1, d 0\) )
65
"Test report send to Hamo some month ago."
In green:
" 1 do not appear to have received this report.
Please resend."
THE INTERPRETER: Sir, shall I translate this?
MR MILLETT: Yes, please.
THE INTERPRETER: Yes? Okay.
(Pause for translation)
MR MILLETT: Now, if we go to the next email up on the
left - hand side in the English, Hamo Gregorian to
Claude Wehrle on Friday, 23 November 2007, in green he
says:
"Claude
"Please find my response below (in green).
"Regards
"Hamo."
Then above that, Claude Wehrle responds to
Hamo Gregorian the same day:
"Hello Hamo,
"Please find enclosed the document for our Reynobond
FR certification.
"Regards,
"Claude."
Then the next email up from Hamo Gregorian to
Claude Wehrle, again the same day, 23 November 2007:
"Claude
"The report is fine.
"I' II add appropriate statement to section 6.1.
"Regards
"Hamo."
Then at the very top of page 35 in the English we see an email from Claude Wehrle back to Hamo Gregorian, again on 23 November 2007:
"Thank you very much for your help.
"Just a quick last question:
"On page 3 of 8 , § General:
"'This Certificate is a Confirmation French
Agreements 2/04-1081 and ...'
"Can you write 'This Certificate is a Confirmation French Agreements 2/07-1244 and ...'?
"In fact our 'Avis Technique' has a new number since it has been review on April this year.
"You can find it in attachment (sorry I only have it
in French).
"Regards,
"Claude."
(Pause for translation)
Now, that's an email run I've shown you in late November 2007.

Can I now show you another email run in

\section*{67}

December 2007 at the same exhibit, page 155
\{MET00053158_P16/155\}. Again, I'm afraid there is no French translation of this.

This is an email -- and I'll read it in the English and then, Madam Translator, if you could translate to
the witness, please -- to Claude Wehrle again from Mandy Osman at the BBA, copied to others at the BBA, and she says:
"Dear Mr Wehrle,
"Please find enclosed a copy of the final 'accepted' draft of the proposed Agrement Certificate for the above product and would welcome your approval of it. This is the draft we shall send to our Chief Executive for formal issue of the Certificate."

Then in bold:
"To request changes during or after formal issue will cause delay as well as resubmission of the draft, and may well result in further cost to your company - we recommend, therefore, that you satisfy yourself now that the draft meets your requirements in full.
"If we have not heard from you by 8 January 2007 we shall assume you are satisfied with the draft and will proceed to issue. Please let me know immediately if you wish us to continue before this date.
"We cannot enter into discussions concerning the

Certificate but you should satisfy yourself that
publication can proceed. As this is the final stage before publication, we would advise you to check the sample thoroughly. Though we exercise a rigorous check at all stages, as with all complex documents, there may be a few occasions when problems remain undetected. As is normal with publishing/printing, the responsibility for final checking rests with you the client.
"For your information, once the Certificate is formally issued we will confirm this to you, and enclose a copy of the issued Certificate (for information only) just before we send the Certificate to our printer."
\[
\text { If we }--
\]

THE INTERPRETER: I'll translate, if you allow me.
(Pause for translation)

\section*{MR MILLETT: Thank you.}

Now, if we go down to page 157
\{MET00053158_P16/157\}, we can see the document that was attached to Mandy Osman's email on this date, and we know from other documents, which I'll show you briefly, that this certificate in draft, draft 3, was sent to Colin Southgate and Deborah French in early January 2008.

Can we go to page 165 \{MET00053158_P16/165\}, for example, in this email run. You can see the second

\section*{69}
email down in that email run is from Claude Wehrle to
Colin Southgate and Deborah French on 2 January 2008,
and it says -- I'll read it in English and then it can
be translated to you in French:
"Hello,
"At first .... HAPPY NEW YEAR 2008!!
"Can I ask you to read the attached document and to
send me any comment ASAP?
"Regards,
"Claude."
(Pause for translation)
Now l've shown you details of emails in November and December 2007 and early 2008, do you accept that Claude Wehrle was involved in the detailed drafting and approval of the BBA certificate?
A. (Interpreted): Yes.
Q. So when Claude Wehrle says, as I've shown you, at paragraph 55 of his witness statement that he was not aware until after the Grenfell Tower fire of the precise detail of its content, that is wrong, isn't it?
A. (Interpreted): I mean, yes, you're right, but, I mean, we mustn't forget ten years elapsed in between, and, yes, I mean, that's my opinion.
Q. Indeed.

Are you able to explain how it is that Mr Wehrle was
able to assert in his witness statement that he was not aware until after the Grenfell Tower fire of the precise detail of the content of the BBA certificate?
A. (Interpreted): No.
Q. Can I ask you to be shown the transcript at
\{Day91/6:25\}, which was yesterday. I'm going to read it
in English and then, Madam Translator, if you could translate into French. There will have been a French version of this in the record, but I'm afraid I can't lay my hands on it because it will be an audio recording, but if you could translate it, please.

You told us yesterday this, line 25:
"Answer: I believe, having discussed this with Claude Wehrle after the fire at Grenfell, that we were not aware of what was written within the fire test -what was written within the BBA certificate with regard to fire tests, European fire tests."

Question at line 5 \{Day91/7:5\}:
"Question: I don't understand. What was it that you were not aware of?"

This is your answer, Mr Schmidt:
"Answer: So the BBA certificate, after discussing with Claude Wehrle after the Grenfell fire,
Claude Wehrle was not aware of the fire references made within the BBA certificate."

\section*{71}

At line 11 \{Day91/7:11\}:
"Question: Are you telling the Inquiry that
Claude Wehrle told you that he did not know of the references to European class \(B\) in the BBA certificate?
"Answer: (Interpreted): Yes, I think that at least he hadn't remembered it anyway.
"Question: Are you able to explain why Arconic did not correct the false statement in its BBA certificate about Euroclass B in relation to ... until after the Grenfell Tower fire?
"Answer: (Interpreted): Well, I think I already answered the question. I get the impression that we weren't aware of it."

Now, my question for you, Mr Schmidt, is: remembering that conversation with Mr Wehrle after the fire, did he tell you that he was not aware of the fire references made within the BBA certificate?
A. (Interpreted): Yes.
Q. Do you accept, me having shown you the emails from November and December 2007 and early 2008, that what he was telling you during that conversation was wrong?
A. (Interpreted): Yes. Well, I don't know if he did it deliberately. Once again, ten years had elapsed, so I don't know whether he just didn't remember what was written within that certificate.
```

Q. Did he tell you -- I'm so sorry, do continue.
A. (Interpreted): Specifically .
Q. Did he tell you that he was not involved in the drafting
of the BBA certificate -- sorry, let me put the question
again.
Did he tell you that he was not aware of the fire
references made in the BBA certificate or that he
couldn't remember what they were?
A. (Interpreted): I don't know. Maybe I'm not being
precise enough, but I can't confirm one way or the
other.
Q. Let's look, then, at the BBA certificate. Now, I've
shown you quite a lot of it.
Having read the certificate, as we've seen from the
email exchanges in late 2007, early 2008, would you have
expected that Claude Wehrle would have pointed out any
errors or omissions in it, as he was asked to do?
A. (Interpreted): Yes.
Q. Can you explain why Mr Wehrle did not point out to the
BBA that the certification Euroclass B related only to
the rivet form of PE and not to the cassette form?
A. (Interpreted): No.
Q. Can you explain why it is that Arconic, and Mr Wehrle in
particular, failed to draw the distinction between the
fire performance of cassette and the fire performance of

```
        73
        rivet in PE to the attention of the BBA?
A. (Interpreted): No.
Q. Can you explain why the certificate does not state that
    the test result, Euroclass B-s2, d0 was achieved for PE
    only in the rivet form but not in the cassette form?
A. (Interpreted): No.
Q. Do you accept that that omission made the certificate
        thoroughly misleading?
A. (Interpreted): Yes.
Q. Do you accept that it was thoroughly misleading because
        it pretended that the cassette-fix version of
        Reynobond 55 in standard PE was covered by a Euroclass B
        standard classification when in fact it wasn't?
A. (Interpreted): Could I see the certificate again,
        part 6.1?
Q. I think on the French version --
A. (Interpreted): In English, that's all right.
Q. Is it? I can show it to you in English, Mr Schmidt,
        \(\{B B A 00000047 / 5\}\), but I think we ought to have the French
        version, \{ARC_T000012/6\}. Look at 6.1.
A. (Interpreted): So no reference is made to the system.
        Okay.
Q. Right. Do you want to change any of your answers,
        having been shown this document?
A. (Interpreted): No, I'd just like to come back to the
question.
Q. The question is really this: looking at paragraph 6.1 of the English version, if you like, or the French version, do you accept that the reason why paragraph 6.1 at the very least was very misleading was because it pretended that the cassette-fix variant of Reynobond 55 PE was covered by a Euroclass B classification when in fact it wasn't?
A. (Interpreted): In 6.1 it's not clearly formulated, neither with regard to cassette or riveted system.
Q. You say it's not clearly stated; I'm suggesting to you that it's positively misleading because it conceals the fact that the product which achieved B-s2, d0 was in fact the riveted variant of standard PE and not the cassette variant.
A. (Interpreted): Yes, it wasn't sufficiently precise or clear.
Q. Can you explain why Claude Wehrle, having been given a number of opportunities and told expressly to bring to the BBA's attention any errors or omissions, did not tell them about test 5 B , or tell them that only the rivet version of Reynobond 55 PE had achieved that classification?
A. (Interpreted): I can't explain it, I would just be making suppositions.

\section*{75}
Q. You see, the question I would ask Mr Wehrle, if he was sitting where you are sitting, Mr Schmidt, is why he let this text go out, given what he knew. Can you explain that? Can you give the answer that he would give?
A. (Interpreted): No.
Q. No. So you're unable to tell us why this certificate at paragraph 6.1 did not simply state the truth, which was that only the PE rivet version of Reynobond 55 had obtained Euroclass B?
A. (Interpreted): No.
Q. I would be suggesting to Mr Wehrle that his communications with the BBA in which he did not make this clear to them was deliberate and dishonest. Can you answer that question?
A. (Interpreted): No.
Q. As managing director at the time this document was approved and sent out by the BBA, are you able to account for how Arconic allowed this document to be --
A. (Interpreted): No.
Q. Were there any systems in place within Arconic at the time - - late 2007, early 2008 - - to ensure that those occupying Claude Wehrle's position in the company did not make false and misleading statements to Arconic's market?
A. (Interpreted): Yes, we had a quality system, we had

ISO 9001, which was established since 1993, so all processes in principle had to be followed. We took -we considered that audits were something that was constructive. Companies are not necessarily perfect, can be far from perfect, we can always improve them, and so we considered audits to represent an opportunity.
Q. What went wrong in this case, Mr Schmidt?
A. (Interpreted): I don't know.
Q. Okay.

Now, I want to show you a document that is a little bit later in time -- no, let me go back to that later on. Forgive me, Mr Schmidt.

I've seen a message that there may have been a translation question in the last few questions. We will look at that in the break and may have to revisit that last line if necessary.

Can I then move on to section 6.5 of the
BBA certificate. What I want to do first of all is to go back to the BBA certificate in both languages and go to section 6.5 \{BBA00000047/5\} \{ARC_T000012/7\}. We looked at it just after the lunch break.

Just a reminder of 6.5 , it says:
"For resistance to fire, the performance of a wall incorporating the product, can only be determined by tests from a suitably accredited laboratory, and is not
\[
77
\]
covered by this Certificate."
Now, l've shown you that again.
Can we go to Claude Wehrle's witness statement,
please, English page 17 \{MET00053190/17\}, French page 21
\{MET00048342/21\}, in both cases at paragraph 58.
Okay, Mr Schmidt, if you read paragraph 58 in French
to yourself, I' II read the English aloud. He says:
"The BBA Certificate also makes it very clear, in
paragraph 6.5, that in relation to resistance to fire, the performance of a wall incorporating the product, i.e., the performance of an actual cladding system (as opposed to a mock system under test conditions), could only be determined by tests from a suitably accredited laboratory, and would not be covered by the certificate (which related to the product and not to the method of fixing or any other feature of the system). In other words, the fact that the certificate explains that a PE sample achieved an EN B classification in a particular systems test was not a guarantee that the outcome would be the same in different systems or with different fabrications."

Now, you may not be able to help me with this. I have a number of technical questions, and if you can't help me then you can't help me. I'm showing you that.

Is Claude Wehrle referring there to full systems
tests such as the British Standard 8414 test that we have in the UK or the LEPIR2 test in France? Is that what he means?
A. (Interpreted): Well I don't know whether that's what he is saying here. That could be the case, I imagine, but I can't confirm 100\%. I mean, I've heard mention made of these tests, I know roughly what they are.
Q. The reason I ask is because we can find no record of any tests of a whole façade build-up in the UK incorporating Reynobond 55 PE core at any time before the Grenfell Tower fire. Are you aware of any?
A. (Interpreted): No.
Q. Let's go back to the certificate, then, if we may, back at \(\{\) BBA00000047/5\} and \(\{\) ARC_T000012/7\}, and look at paragraph 6.5 again for the third time, I think.

You can see that it mentions resistance to fire there, doesn't it? That's not the same thing, is it, as reaction to fire?
A. (Interpreted): Yes.
Q. Okay. Did you appreciate the distinction between reaction to fire and resistance to fire when you did your witness statement?
A. (Interpreted): No, I'm not sure. I'm not sure of differentiating .
Q. Can I then go to the document I wanted to show you,

\section*{79}
which is a little bit later in the chronology,
June 2010, but it's, I think, convenient to pick it up at this stage. \{CEP00053378\}.

This is a document called "Reynobond, Fabrication guideline, Step by step to a perfect cladding", and we believe the date is June 2010, and the reason, Mr Schmidt, we believe that is because Arconic has confirmed that as the date of production of this document.

My first question is: did you see this document in 2010?
A. (Interpreted): Can't confirm.
Q. Okay. Have you ever seen this document before?
A. (Interpreted): Probably.
Q. Do you remember when you first saw it, do you think?
A. (Interpreted): No.
Q. Let's look at page 12 \{CEP00053378/12\}, please. This is about machining, and I am afraid I don't believe we have
a French version of this document, and if we do,
I apologise, I have not been able to find it, but work with me in the English.

Can you see that it deals with general fabrication techniques, and if you just translate that for me,
Madam Translator, on the left.
(Pause for translation)
Q. The BBA certificate doesn't say, does it, "Don't use Reynobond 55 PE unless you have tested it in its system
in which it is going to be used", does it?
A. (Interpreted): Yes, that's what I understand in 6.5.
Q. What was the point of the representation made in 6.1 and 6.2 , and indeed 6.3 , about the fire classifications in relation to Reynobond?
A. (Interpreted): I don't know.
Q. Can we try the question a different way round, Mr Schmidt, so there is no confusion here.

Would you accept that even the most competent of UK professionals -- architects, designers, construction professionals -- looking at the BBA certificate closely would be led to believe that Reynobond 55 PE in cassette-fix had achieved a Euroclass B when it had not?
A. (Interpreted): In 6.1 and 6.2 there is no system that is mentioned, so no.
Q. I don't understand the answer, I'm afraid.

Let's have paragraph 6.1 of the BBA certificate up again. Let's have \(\{B B A 00000047 / 5\}\), which is the English version, and the French version \(\left\{A R C \_T 000012 / 6\right\}\). Let's look at paragraph 6.1, please, and it says there:
"A standard sample of the product, with a grey/green Duragloss 5000 coating, when tested for reaction to fire, achieved a classification of \(B-s 2, d 0\) in accordance with EN 13501-1:2002. A fire retardant sample of the product, with a gold-coloured Duragloss
matters, as it would not know exactly how its product
product would be used in combination with. For the same reasons, neither could AAP SAS form a view as to whether
the design of the façade of the tower complied with relevant building regulations and associated guidance, so far as fire safety, or indeed any other aspects, were concerned. AAP SAS did not therefore rely on any advice from third parties about such issues, as they were not (and would never be) within its remit to consider; AAP SAS is simply a supplier of one component product which may be used in the façade of a building."

Now, this is your evidence, Mr Schmidt, to the Inquiry.

How would any architect or designer or construction professional have all the information available to it to make a proper decision if they did not know of the existence of test 5B or what it showed? (Pause)
A. (Interpreted): Well, if we go back to the

BBA certificate, it 's exactly the same thing that is said there, that any product has to be tested within its system.
A. (Interpreted): No.
Q. You see, I thought you had accepted that earlier in your evidence. Let me just see if I can --
A. (Interpreted): Well, maybe -- I'm sorry, maybe I don't really understand the question in its entirety, but in this text here it says that a product has obtained in -what it says is that at the time of a fire test the product obtained such a result. That's what it says, essentially.

I mean, at 6.5 it says the product has to be tested with the whole of the system and probably to make sure of the fire validity of the whole thing.
Q. Mr Schmidt, we're about to break, but do you understand the difference between reaction to fire and resistance to fire?

\section*{87}

\section*{(Pause)}
A. (Interpreted): No, I'm not sure I do.
Q. I'm going to try one more time before the break.

Can we please go back to paragraph 6.1 of the BBA certificate \(\{\) BBA00000047/5\} \{ARC_T000012/6\}. Looking at paragraph 6.1, it says there that:
"A standard sample of the product, with a grey/green Duragloss 5000 coating, when tested for reaction to fire, achieved a classification of \(B-s 2, d 0\) in accordance with EN 13501-1:2002."

What would tell the competent UK building professional or architect that only the rivet version had obtained a classification of \(B-s 2, d 0\), but not --
THE INTERPRETER: Forgive me, and the sound went a bit funny, can you repeat what you just said?
MR MILLETT: What would tell the competent UK building professional or architect that only the rivet version had obtained a classification of \(B-s 2, d 0\) but not the cassette version?
A. (Interpreted ): Well, the text says -- and that's probably why I'm a bit confused and it's not very clear for me -- that during a given test, fire test, the product obtained a certain classification, but it seems to presuppose also that the product wouldn't necessarily always obtain the same classification.
```

MR MILLETT: Mr Chairman, I'm going to ask for a break at
this point, I think. It's 3.15 and it's probably time
for a break.
SIR MARTIN MOORE-BICK: Yes, I think you're right,
Mr Millett.
We are going to have a short break, Mr Schmidt, and
come back, please, at 3.35. Please remember not to
speak to anyone about your evidence over the break.
So we will see you a bit later on. Thank you.
(3.20 pm)
(A short break)
(3.35 pm)
SIR MARTIN MOORE-BICK: Welcome back, everyone. We're ready
to resume hearing from Mr Schmidt, but first, as always,
I think I had better check that our interpreters are
with us.
MS KENNEDY: We can see and hear you, thank you.
SIR MARTIN MOORE-BICK: Thank you very much.
Then, Mr Schmidt, are you there?
THE WITNESS: (Interpreted): Yes, I'm here.
SIR MARTIN MOORE-BICK: Good. And you're ready, I hope, to
continue.
MR MILLETT: Mr Chairman, thank you very much.
I want to turn to a different topic, which is
information available to salespeople.

```

Now, we heard from Deborah French that she started
    at Arconic in late 2007, just as the BBA certificate was
    being finalised, so that puts her in the chronology.
    All right?
A. (Interpreted): Yes.
Q. To the best of your recollection, after you began your
        role as managing director at Merxheim in 2007, is it
        right that your salesforces in different countries were
        generally dealing with fabricators and designers and
        architects; yes?
A. (Interpreted): Yes.
Q. What about fabricators?
A. (Interpreted): Yes.
Q. Do you agree --
SIR MARTIN MOORE-BICK: Can I just interrupt a moment? I'm
        sorry to do that, Mr Millett.
            Mr Schmidt, you look a little bit puzzled about the
        use of the word "fabricateur". Is that not what you
        would normally describe them as?
A. (Interpreted): No, that word is okay, but I thought I'd
        heard it in a previous sentence.
SIR MARTIN MOORE-BICK: All right. I'm sorry to interrupt.
MR MILLETT: Do you agree that Arconic's salesforces would
    need to have a grasp, an understanding, of the technical
    characteristics of the product they were selling?
A. (Interpreted): Yes.
Q. Does Arconic require its salesforces to have experience in selling building products?
A. (Interpreted): No, not necessarily .
Q. Did Arconic require their salesforces to have some technical knowledge of their products?
A. (Interpreted): Yes, a certain amount, yes.
Q. Can we go to Claude Wehrle's witness statement at page 36 in the English \{MET00053190/36\}, please, and page 10 in the French \{MET00048329/10\}. I want to look at paragraph 124.

I' II show what he says there. He says - - and if you read in the French, I' II read the English out:
"I have also been asked to confirm whether AAP SAS provides training to its staff and contractors in relation to the technical performance of its products including in respect of fire performance. In relation to AAP SAS employees (and external sales teams) this training occurs in different forms but includes information on technical matters being provided to relevant employees as part of their 'on-boarding' process. This is usually at least a half-day session and the content will depend upon the particular role of the employee, for example, if they were responsible for sales into France there may be a greater focus on French

\section*{91}
related technical certifications."
Now, in relation to the training given by Arconic described there by Mr Wehrle, were salespeople trained on the certification that was relevant to their particular territory?
A. (Interpreted): I can't confirm. There was no one specific on the site at Merxheim who had the specific information with regard to the countries to which we delivered. I think they probably had some information on the necessary tests or other.
Q. Would that include training on the testing regimes relevant, for example, to the United Kingdom, or England and Wales specifically?
A. (Interpreted): But that's the second half of my answer before. So I'd like to repeat, there is no one in Merxheim who would have been able to explain the regulations with regard to the countries that we delivered to, to a salesman or a sales team.
Q. Well, that's not a repetition of your previous answer, it 's rather different from it. So let's just be clear. Would - -
A. (Interpreted): I just think that potentially something had been missed out in the interpretation.
Q. Let's try again. I' II ask you just a simple question: did the United Kingdom's salesforce -- so Mr Southgate,
```

    Ms French and then Mr Meakins - - get training on the
    testing regimes which applied in the United Kingdom, and
    specifically England and Wales?
    A. (Interpreted ): I don't know. One would need to check.
When someone is taken on from outside, an external
salesperson is taken on, they would come here to the
site, they would come here for one week or two weeks and
they would visit the factory, and so therefore they'd
meet the technical teams, not only necessarily
Claude Wehrle's technical teams, they would also meet
people responsible for paints and laboratories. In
principle there is a kind of follow-up sheet or document
for each employee, after they've been taken on. So, to
answer your question more precisely, it 's potentially
a good idea to look at those documents.
Q. Have you looked at those documents?
A. (Interpreted): No.
Q. Why not?
A. (Interpreted): I didn't think about it.
Q. Why have you just thought about it now?
A. (Interpreted ): Because you put me on the path or you
asked me the question.
Q. These documents you're referring to, are these training
records for sales personnel?
A. (Interpreted ): It 's a document that exists for each

```
    employee that's taken on.
Q. My question again: are they training records for each
    member of the salesforce?
A. (Interpreted): Yes, there's a heading, then the time it
    was taken and also the person who gave the training.
    It 's a document that HR would have, human resources.
Q. To the best of your knowledge, did those documents
    reflect technical training on the products that each
    member of the salesforce was selling in his particular
    territory?
A. (Interpreted): I can't answer, I don't know, no
    There's probably a document of the kind, but I don't
    know - - I don't have in mind precisely what appears in
    each document.
Q. No. We have no such documents, Mr Schmidt. Are you
    able to explain why these documents were not provided by
    Arconic to the Inquiry?
A. (Interpreted ): No, I have no idea, and if they exist
    they should be available.
Q. Would you be prepared to provide them?
A. (Interpreted): Yes, of course.
Q. Okay. Well, we'll have to take that up with Arconic's
    lawyers.
        Is it right that salespeople working around the
        world in the territories in which Arconic sold its
Q. My question again: are they training records for each member of the salesforce?
A. (Interpreted): Yes, there's a heading, then the time it was taken and also the person who gave the training. It's a document that HR would have, human resources.
Q. To the best of your knowledge, did those documents reflect technical training on the products that each member of the salesforce was selling in his particular territory ?
A. (Interpreted): I can't answer, I don't know, no. There's probably a document of the kind, but I don't know - - I don't have in mind precisely what appears in each document.
Q. No. We have no such documents, Mr Schmidt. Are you able to explain why these documents were not provided by Arconic to the Inquiry?
A. (Interpreted): No, I have no idea, and if they exist they should be available.
Q. Would you be prepared to provide them?
A. (Interpreted): Yes, of course
Q. Okay. Well, we'll have to take that up with Arconic's lawyers.

Is it right that salespeople working around the world in the territories in which Arconic sold its
93
products would attend sales meetings once or perhaps twice a year at Merxheim?
A. (Interpreted): Yes.
Q. Do you remember, was it obligatory? Did they have to come?
A. (Interpreted): Yes. Generally everybody came. Maybe there would be one or two people missing, but yes.
Q. Do you remember whether there was usually an update from the technical sales support team?
A. (Interpreted): Yes, I believe that at each sales meeting there was a presentation from the team that supported the sales, it was part of a normal schedule.
Q. Would Arconic's management expect these salespeople to listen to the update relevant to their product and take on board the information given to them?
A. (Interpreted): Yes.
Q. So do we take it that your salesforce couldn't ignore information and decide for themselves what was relevant to them and what was irrelevant to them?
A. (Interpreted): Yes.Now, let's go to your second witness statement, please, in the English at page 15 \{MET00053187/15\} and in the French at page 20 \{MET00048331/20\}, in both cases paragraph 48.

Now, you have the whole of paragraph 48 there in the French on the screen. In the English it skips over the

\section*{95}
page. I'm going to read the English while, Mr Schmidt, please read the French to yourself.
"In relation to awareness within AAP SAS of the results of fire performance testing and certification, a number of people within AAP SAS would have been aware including the sales team and the technical sales support team. Members of the sales team would be aware of results as they are made available to them through an online system referred to as the 'toolbox'.
Claude Wehrle and the technical sales support team would upload to the toolbox a new or updated classification report or certification and would notify the sales team via email of any such changes. Such emails were sent to two mail distribution lists: 'RAF Liste Commercial Interne' which includes all members of the Sales and Marketing Department that are based in Merxheim including those working in 'internal sales', 'outside sales' and 'technical support' and 'RAF Liste Commercial Externe' which includes all members of the Sales and Marketing Department that are based outside of Merxheim and either employed by AAP SAS or are its agents, including for example, Deborah French and Vince Meakins. For completeness, it should be noted that in my experience the technical (research and development) team may have a general awareness of tests being carried out
in the context of any product modifications and to the extent that technical information is required by the technical sales supports team as part of the testing it arranges. I would also note that information may have been presented to management on specific occasions, for example, in relation to investment decisions in respect of FR or A2 investment projects."

Now, we've heard some evidence about the toolbox from Deborah French and Vince Meakins. Vince Meakins told us that there was an early version of the toolbox and one that came much later in, he thinks, 2018, and he says that was the one, the later one was the toolbox that salespeople could access directly.

My question is: is it right that there were at least two versions of the toolbox?
A. (Interpreted): I can't confirm, but if that's what Vince says, then I imagine he's probably right.
Q. Let's see if you can help us further.

When you refer to the online system referred to as the toolbox, do you remember when that system was established?
A. (Interpreted): No.
Q. Was there a time when the original toolbox system fell out of use and wasn't used at all?
A. (Interpreted): I don't know.
Q. Do you remember when the version of the toolbox that members of the salesforces could access was established?
A. (Interpreted): Well, no, not exactly, but in theory, regarding that tool, it was on a server which was a sort of commercial file and all the employees within the commercial team could have access to it.
Q. Did you ever visit the toolbox?
A. (Interpreted): No.
Q. Did you ever have anything to do with establishing the toolbox or deciding how it would work, what documents would go in it or who had access to it?
A. (Interpreted): No, and I don't know really at what time it was set up and which commercial director was in charge then.
Q. What is the source of the statements that you make in your statement about the toolbox that I've read to you?
A. (Interpreted): In fact it's when we started searching for documents, doing research after Grenfell, that's when I learned that that toolbox existed.
Q. Who told you --
A. (Interpreted ): And at the time of Grenfell, I didn't know.
Q. Who told you about the toolbox?
(Pause)
A. (Interpreted ): I'm not certain, but it might well be

Claude Wehrle.
Q. So the statements that you have made in your witness statement about the toolbox are not statements from your own knowledge and you aren't able to tell me exactly where you got that information from; is that correct?
A. (Interpreted): I mean, they're second-hand information, if you like.
Q. Are you able to tell us from your own knowledge what kinds of documents would normally be in the toolbox in the period 2012 to 2016?
A. (Interpreted ): Well, between the period 2012 to 2016 I couldn't necessarily give you a very detailed list, but as to the type of documents, I think you would find all the marketing documents, and updated, and also the fire tests would be there.
Q. Is there a document or database which would identify on any particular given date what documents could be found historically in the toolbox?
A. (Interpreted): I don't know, you would have to ask the IT specialist.
Q. Right.

To the best of your own knowledge -- and if you don't know, then tell me - - was a salesperson such as Debbie French able to access the toolbox and explore it for themselves in the period 2012 to 2016?

\section*{99}

\section*{A. (Interpreted): No.}
Q. Do you know who was responsible for keeping the toolbox up to date?
A. (Interpreted): I think there was the technical team and also the marketing team.
Q. Is it your understanding -- and again, if you don't know from your own knowledge, please tell me -- that each time a new classification or certification or test was uploaded to the toolbox, the technical sales support team would email both of the group lists, RAF liste externe and RAF liste interne?
A. (Interpreted ): Well, I saw some of these emails in the various lists of documents that went along with the [ FT ] \({ }^{* * *}\) information connected to the various statements, and it would seem logical for the updates to be systematic. \({ }^{* * *}\)
Q. Is that your interpretation of the evidence you've seen, or is it your evidence of the facts at the time?
A. (Interpreted ): I mean, we're not talking about facts. I mean, I didn't check myself whether it had been done.
Q. Let's see what Mr Wehrle says. Can we please have his witness statement, please, English page 34
\{MET00053190/34\}, French page 7 \{MET00048329/7\}, paragraph 116.

Now, I don't want to show you the whole paragraph,
just one part of it, where he says, and it's four lines down in the English:
"When a new or updated classification report ..."
In the French, I think it's six lines down,
"Lorsqu'un PV".
A. (Interpreted): I can see it, thank you.
Q. I'm going to read in the English, you read the French, please:
"When a new or updated classification report or certification is obtained by myself or others within my team, it would be added to the 'Toolbox' by that team and sometimes an e-mail would be sent to the Sales and Marketing Department email distribution list (referred to as 'RAF Liste Interne' and 'RAF Liste Externe') confirming that changes had been made to the Toolbox or that new classification reports had been obtained."

Now, I want to know about the word "sometimes".
THE INTERPRETER: This is "in general".

\section*{MR MILLETT: Right.}
"In general", then. What was the true position, Mr Schmidt: would emails always be sent, or only generally but sometimes not?
A. (Interpreted): I mean, I've got no specific answer, but when you read that word, which in French means "generally", it means most of the time but there may be 101
A. (Interpreted): It's a difficult question. It's difficult to answer because I don't know whether the regulation in England relied on European test or whether the English regulation had its own regime of tests.
Q. Well, can we agree on this, Mr Schmidt: that if the European classification regime was irrelevant to the United Kingdom, the BBA certificate would not have referred to it?
A. (Interpreted): Well, no, I don't think so, because after the fire I checked various products and BBA certificates from competitors, and in some of them there was absolutely no reference to the European legislation, or to the European test. The European tests were not mentioned in their certificates.
Q. But would you agree, Mr Schmidt, that where the European class \(B\) had been obtained, as it had for rivet at the time, and that European classification was being used as the basis of a statement that the product could be regarded as having class 0 national standard, the European classification was highly relevant?
(Pause)
A. (Interpreted ): Yes, I do understand, at least.
Q. Do you agree?
A. (Interpreted): Yes, I mean, I did see the BBA certificate, which does mention the European

\section*{103}
certification, and then in paragraph 6.2 or 6.3 , I don't remember, it's deducted -- concluded that it has a class 0.

\section*{Q. Thank you.}

So my question, coming back to it, is: assume with me for the moment that the European classification regime applies in the United Kingdom, in parallel, if you like, with the national classification ; would you have expected Deborah French to have appreciated that any update in relation to European classifications of her product, Reynobond 55, was relevant to her job?
A. (Interpreted): Yes.
Q. Thank you.

Now, Deborah French described Arconic's approach to European classifications and updates to such classifications in respect of products like Reynobond 55 PE as "very secret". Her expression was that Arconic was "very secret over stuff like that".

For our record, and to be fair to you, I'm quoting from the transcript of a meeting she had after the fire in 2017 at \(\{\) MET00040858/2\}, around the middle of the page. That's for the transcript. Perhaps it should be translated so you can understand what l've said.
(Pause for translation)
My question for you, Mr Schmidt, is: was Arconic's
general approach as Ms Deborah French describes it, namely that it was very secretive and didn't always tell its sales teams about the test results?
A. (Interpreted): Yes, I mean, I can't say in detail because I don't know, but this is more or less how I see things. I mean, when Claude Wehrle realised that the fire tests that were carried out in 2011 were not at the expected level, the results were not what we were expecting, there were communications that were made in later years, and I also saw in one document that there is a mail that was sent in 2014 to Taylor Maxwell, and I'm not sure exactly in which document it was, but it's information about that sort of thing.
Q. Right.

Do you agree that Arconic's approach was secretive in the way Ms French described?
A. (Interpreted): No.
Q. Let me show you the transcript of her evidence about this discussion she had with Mr Simmons, it was, in June 2017. This is \{Day89/37:20\}.

I'm going to read the question and then,
Madam Translator, if you would translate the question into French, and then I will go to the answer, and we'll do the same.
"'[They] are very secret over stuff like that.'

\section*{105}
"Do I understand correctly that Arconic did not share information with you about, for example, testing programmes?
"Answer: Not until it was necessary for it to be published, no.
"Question: Right. When you say not until it was necessary to be published, what would dictate whether it was necessary to be published?
"Answer: I guess when they needed to update certificates.
"Question: Am I right in thinking that Arconic did not share information with you about the fire performance of Reynobond?
"Answer: They would have shared with me various -the certificates once anything has been -- testing had been done and was -- certificates need to be published, that's when they would send them to us."

Just pausing there, I'm going to ask you the question, Mr Schmidt: is Ms French correct that Arconic would only send updated certificates to the salesforces once the certificates needed to be published but not before that?
A. (Interpreted ): I don't know, and I couldn't answer your question.
Q. Right. Well, I was going to show you, just for
A. (Interpreted): It's linked to all the FR products or FR cores that we carried out over the years, and for some of them, as long as a product hadn't passed the fire tests nor the qualification tests, then no information was given to the salesforce.
Q. If a new or updated fire test or fire classification for a product had been received by Arconic, would you expect the salesforce in the relevant territory for that product to be told straightaway about that new test or classification ?
A. (Interpreted): Yes.
Q. Does it follow that if there was no certificate

\section*{107}
published, such as for test 5B, but test \(5 B\) was just simply treated as a rogue, any salesperson would have no means of finding out about that test result?
A. (Interpreted ): Probably in 2005, yes, I don't think that the sales team was organised to that extent.
Q. What about in the years between 2007 and 2017, the year you started as managing director and the year of the fire, that period?
A. (Interpreted): Well, I think, once again, from 2013/2014, that information circulated and was available for the teams.
Q. One more question before I ask the Chairman to break: have you seen any material at all, either at the time or in your preparation to give evidence today, which suggests that any member of the UK sales team was told of the existence of test 5B?
A. (Interpreted): No, I don't have the information to say so.
MR MILLETT: Mr Chairman, that's a convenient moment. I'm sorry I have gone over by five minutes.
SIR MARTIN MOORE-BICK: I think that would be a good point to stop.

We have overrun a little bit, Mr Schmidt, I'm sorry about that, but we'll break now and we'll resume, please, at 10 o'clock UK time tomorrow morning. Please
```

    don't talk to anyone about your evidence over the break,
    and we'll look forward to seeing you tomorrow.
        Goodnight.
    THE WITNESS: (Interpreted): Have a good evening.
SIR MARTIN MOORE-BICK: Thank you. 10 o'clock, please
(4.35 pm)
(The hearing adjourned until 10 am
on Thursday, 18 February 2021)
109
INDEX
PAGE
MR CLAUDE SCHMIDT (continued) ...................... }
Questions from COUNSEL TO THE INQUIRY ......... }
(continued)

```

a2 (1) 97:7
aap (16) 12:5 15:2,5 28:14
33:7 84:9,911,19 85:4,8,11
91:14,18 96:3,5,21
aapsas (1) \(19: 8\)
aberrant (1) 45:11
able (20) 1:18 5:18 7:8
12:8,23,25 17:2 23:7 36:23
70:25 71:1 72:7 76:17
78:22 80:20 92:16 94:16
99:4,8,24
aborted (1) 20:8
above (8) \(4: 8\) 22:19,25
33:1,11 64:15 66:17 68:11
absolutely (5) 50:4 51:20
52:9 65:3 103:12
accept (22) 12:16,19 16:12 17:8 31:1 34:2,13 35:11,16 41:16 44:25 45:16 46:5,20
70:13 72:19 74:7,10 75:4
86:9 87:4,10
acceptable (1) \(36: 22\)
accepted (2) 68:10 87:12
access (5) 97:13 98:2,6,11
99:24
accident (1) 45:23
accordance (11) 40:13 41:1
57:15,20 58:15,17 61:20
86:24 87:2 88:10 102:4
according (3) 35:22 38:22 39:10
account (1) 76:18
accredited (3) 62:4 77:25 78:13
accuracy (2) 49:20 51:11
achieved (14) 57:14,19
58:16,18 61:16 74:4
75:13,22 78:18 86:13,23
87:1,8 88:9
acm (2) 84:12,20
actual (1) 78:11
actually (1) \(18: 11\)
add (5) 36:2 \(39: 20\) 65:18,24 67:3
added (1) 101:11
addition (1) 102:12 additional (4) 26:6 33:20 49:13 51:8
adjourned (1) 109:7
adjournment (1) 59:24
advice (2) 81:24 85:8
advise (1) 69:3
advised (2) 65:16,21
affairs (1) 21:7
affect (1) 47:24
afraid (6) 53:4 55:22 68:2
71:9 80:18 86:16
after (22) 8:1,2 47:5 53:16
54:25 59:9 63:6 65:9 68:16
70:19 71:2,14,22,23
72:9,15 77:21 90:6 93:13 98:18 103:9 104:20
again (42) 6:23 14:1
17:10,22 18:5 24:8 26:1
27:20,24 30:17 32:19 34:6
37:12,18,20,22,24,25
38:18 39:15 41:11 42:1
48:1 51:4,25 59:19 66:25
67:8 68:2,6 72:23 73:5
74:14 78:2 79:15 81:16
82:14 86:18 92:24 94:2
100:6 108:9
against (1) 9:2
agents (1) 96:21
ago (1) \(66: 1\)
agree (27) 13:4,10,21
15:16,22,24 16:19 17:4
29:9 31:15 32:7,15 49:25
50:3,8 51:11,16,19,25 52:8
57:21 90:14,23
103:5,15,23 105:15
agreed (6) 25:19 43:14,14,19
44:10 45:13
agreement (1) 52:6
agreements (2) 67:13,15 agrement (1) 68:11 air (6) 5:7 6:8,9,13,15,16 akbor (2) 1:5,7 alcoa (1) 20:8 alcoas (1) 19:7 allow (1) 69:14 allowed (2) 16:12 76:18 alloy (1) \(56: 8\)
alone (2) 2:4 18:24 along (6) 54:5 56:5 57:9 60:23 84:1 100:13 aloud (4) 27:1 32:21 64:25 78:7
already (8) \(25: 15,22\) 28:1,3 36:19 60:20 64:17 72:11 also (23) 2:9 14:25 17:2 23:16,17 24:4 26:6,17 28:21 31:23 44:22 46:16 56:16 61:8 78:8 88:24 91:14 93:10 94:5 97:4 99:14 100:5 105:10 alternative (1) 84:13 aluminium (4) 3:24 11:13 56:8 81:6
aluminiumpolyethylene (2) 23:4 54:10
always (6) 60:3 77:5 88:25 89:14 101:21 105:2 amended (5) 61:3,5,7 65:16,21 amendments (1) 49:15 amount (2) 81:3 91:7 analysing (1) 47:5 angle (2) 81:7,9 annex (2) 61:6,6 announcement (1) 22:5 another (6) 2:12 5:19,23 6:2 14:3 67:25 answer (30) 14:7 17:9,13
40:14 42:6 45:15,24
71:13,21,22 72:5,11 76:4,14 82:2,3 86:16 92:14,19 93:14 94:11 101:23 103:2 105:23 106:4,9,14,23 107:1,6 answered (3) 18:21 42:20 72:12
answering (1) 17:11 answers (2) 40:9 74:23 anybody (3) 19:4 34:20 43:2 anyone (5) 30:3 34:24 59:20 89:8 109:1
anything (7) 2:21 17:10,14
37:19 39:19 98:9 106:15 anyway (2) 47:5 72:6 apart (1) 23:10 apologise (2) 15:11 80:20 appear (1) 66:3 appeared (1) 46:19 appears (1) 94:13 appendix (2) 27:13 61:20 applicant (6) 24:16 25:3,5,19 27:4 28:2
application (14) 4:20 9:3,7,18,22 12:10,15,21,25 13:4 22:24 30:23 33:15 36:16
applied (4) 44:4,4 82:13 93:2 applies (2) 42:22 104:7 appreciate (2) 64:15 79:20 appreciated (2) 102:22 104:9 approach (3) 104:14 105:1,15
appropriate (2) 16:5 67:3 approval (3) 64:16 68:12 70:15
approve (1) 63:13 approved (7) 42:13,16,21,23 61:2,20 76:17 approximately (1) 20:4 april (1) 67:17 architect (3) 85:15 88:12,17 architects (3) 84:5 86:10 90:10
architectural (1) 56:12
architecture (8) 10:13 33:4 53:20 54:4,9 56:7,25 64:12 arconic (84) 1:10 5:19,22 6:1,5 7:14,21 8:5,17 14:16 15:16,24 16:4,6,20 17:25 18:19,25 19:4 20:23 21:2 29:10 30:23 31:2,6,10 32:2 34:1,10,16,20,24 35:6,14,19,23 37:3 38:19,20,23 39:13,25 40:10,23 41:3,12,14,16 42:2 43:2 44:10,12 45:7,10,16,18 46:10,22 47:1 48:3 49:19,22 51:10,13 52:25 72:7 73:23 76:18,20 80:7 81:23 82:4,24 90:2 91:2,5 92:2 94:17,25 104:17 106:1,11,19 107:20 arconics (15) 8:25 9:3,7 29:7 33:25 34:9 40:22 46:5 76:23 90:23 94:22 95:13 104:14,25 105:15

\section*{arct000004 (1) 18:2}
arct0000041 (1) 22:8
arct0000042 (3) 24:5 26:14 27:11
arct0000043 (3) 24:20 26:24 27:25
arct0000044 (1) 24:11
arct000012 (1) 52:21
arct0000122 (1) 53:6 arct0000123 (1) 55:20 arct0000124 (1) 56:21 arct0000126 (3) 74:20 86:19 88:5

\section*{arct0000127 (2) 77:20 79:14}
arct0000146 (1) 57:7
arct000015 (1) 11:4
arct000016 (1) 11:4 arct000017 (1) 3:11 arct0000172 (1) 3:21 arct0000174 (1) 4:6 arct0000221 (1) 9:21 arct00002210 (1) 12:4 arct0000223 (1) \(10: 7\) arct0000225 (1) 11:8 arct0000227 (1) 11:22 arent (1) 99:4 around (3) 43:11 94:24 104:21
arranges (1) 97:4 asap (1) \(70: 8\) ask (40) 2:3,22 9:2 10:3 14:22 18:5,23 19:1 27:22,24 35:21 36:25 37:4,18 38:8,13,16,18,19 39:6,12,18 43:2 50:21 51:4 53:1 59:12 63:8 64:3 65:1 70:7 71:5 76:1 79:8 81:3 89:1 92:24 99:19 106:18 108:12
asked (7) 39:22,25 40:8 46:17 73:17 91:14 93:22 asking (5) 3:8 13:19 16:19 44:24 46:3
aspects (1) \(85: 7\)
assert (1) 71:1
assessed (3) 26:22 54:15,19 assessing (2) 8:25 44:11 assessment (6) 22:21 28:21 33:3,6 44:18 61:19 assist (1) 7:23
assistant (2) 19:11,16 assisting (1) 19:17 associated (2) 84:23 85:6 assume (3) 37:25 68:22 104:5
assuming (2) 14:17 39:24 assurance (1) 40:20 attached (5) 11:15 49:5 64:19 69:19 70:7 attachment (1) 67:18 attend (3) 14:20 40:6 95:1 attention (3) 62:10 74:1 75:20
au (1) 40:21 audio (1) 71:10 audit (10) 28:22 39:17,17,20 40:6,11 41:7,16,25 42:9 auditor (3) 39:2,21 40:16 auditors (2) 39:18 40:8 audits (6) \(36: 3\) 38:24,25 46:17 77:3,6
august (8) 9:3,6 13:11 20:2
21:21 22:6,13,22 authorised (1) 19:5 available (18) 25:15,23 28:1,3 29:14 34:1,10,17 36:4 45:7 56:11,13,16 85:16 89:25 94:19 96:8 108:10
avis (2) \(33: 8\) 67:16 aware (18) 8:11,14,17 28:10,13 63:6 70:19 71:2,15,20,24 72:13,16 73:6 79:11 84:11 96:5,7 awareness (2) 96:3,25
b (18) 4:13 27:8 42:13,16,21 44:14 61:2,20 72:4,9 73:20 74:12 75:7 76:9 78:18 86:13 87:8 103:16 back (21) 22:8 27:23 30:9 36:7 55:25 59:8,18 60:1,8,19 67:7 74:25 77:11,19 79:13,13 85:20 88:4 89:7,13 104:5 background (1) 9:2 band (2) 53:21 54:6 barriers (1) 62:7 based (3) \(84: 6\) 96:16,20 basic (2) 16:10 43:16 basis (4) 12:16 15:5 35:18 103:18
bba (149) 6:19 7:4,11 8:5,12,15,18,20,24 9:3,8 13:1,11 14:17,19 15:1 16:5,20 17:15,25,25 18:11,19,25 19:2 20:24 21:3,3 23:17 25:9,16,20 26:4,5,22 27:5,8,17 28:14,16 29:7,11,15 30:23 31:3,6,11,14,21,24 32:2,7,14 33:2,7,17,19 34:1,9,17,19,21,24 35:6,11,15,17,20,21,24 36:2,16,17,21,22,25 37:4 38:16,19,24
39:5,8,12,16,25 40:6,10,16,24 41:3,6,12,15 42:2,5 44:4,11 45:2,12,13,17 46:6,9,14,21,22 47:2,5,12,16,20,22 48:4,8,22 52:19 60:18 63:5,10 64:19 68:7,7 70:15 71:3,16,22,25 72:4,8,17 73:4,7,12,20 74:1 76:12,17 77:18,19 78:8 85:21,24 86:11,17 88:5 90:2 103:7,10,25 bba00000047 (1) \(52: 20\) bba000000473 (1) 55:20 bba000000475 (6) 57:6 74:19 77:20 79:14 86:18 88:5
bba00000050 (1) 11:2 bba00000053 (1) 11:2 bba00008042 (1) 18:2 bba000080421 (1) 22:7 bba00008042133 (1) 42:11 bba000080422 (3) 24:4 26:13 27:11

\section*{bba000080423 (3) 24:20} 26:23 27:25 bba000080424 (1) \(24: 11\) bba00008288 (1) 3:10 bba000082882 (1) 3:21 bba000082884 (1) 4:6 bbas (2) 44:18 75:20
became (2) 5:10 9:4 before (29) 2:22 5:12,14 7:25 9:4,23 10:1 12:1 17:23 18:8 22:24 25:21 27:6,22 31:1 33:24 34:8 43:1 62:17 68:24 69:3,12
79:10 80:13 81:2 88:3
92:15 106:22 108:12
began (2) 21:21 90:6 begin (5) 2:3 3:7 30:11 32:16 60:3
beginning (6) 20:18 21:21
51:1 83:11,13 84:17
begins (1) 83:17
behalf (2) 12:5 24:16 behaviour (6) 4:13 54:21 55:1 57:7 60:21 81:22
behind (2) \(21: 8\) 62:7 being (9) 7:22 20:12 21:6 64:1 73:9 90:3 91:20 96:25 103:17
believe (19) 5:14 9:25 16:13 18:7 20:25 21:5,11 40:2,3,8,18 53:12 71:13 80:6,7,18 86:12 87:7 95:10 believed (2) 21:13 45:10 below (4) 44:20 45:3 56:18 66:14
best (6) 7:10 37:3 53:13 90:6 94:7 99:22 better (4) 2:2 7:8 44:2 89:15 between (19) 17:7,16,25 18:19,25 22:6 25:19 28:14 42:4 47:22 51:23 52:10 70:22 73:24 79:20 82:14 87:24 99:11 108:6
big (2) \(51: 7\) 56:3
bit (14) 4:9 14:10 22:15 24:21 42:24 54:14 56:19 77:11 80:1 88:14,21 89:9 90:17 108:23
complete (1) 33:5 completely (1) \(44: 15\) completeness (4) 49:20
51:11 96:23 107:1 complex (1) 69:5 complied (2) 29:10 85:5 comply (1) \(84: 23\) component (1) 85:11 comportement (2) \(54: 24,25\) composite (4) 3:23 11:12 23:4 54:10
composition (3) 25:12,14,18
comprise (1) \(56: 8\)
concealed (1) 47:20
concealing (1) 17:5 concealment (3) 45:18 46:6,9
conceals (1) 75:12 concerned (2) 44:8 85:8
concerning (2) 26:6 68:25
concluded (1) 104:2
conclusion (1) \(61: 12\)
conditions (7) 5:2 24:6,12,22
33:25 34:9 78:12
condones (1) 46:10
conduct (2) 28:23 46:9
conducted (2) \(32: 3\) 36:24
confidence (1) 28:21
confirm (14) 2:6,7,9,11,14 38:4 48:12 69:10 73:10 79:6 80:12 91:14 92:6 97:16
confirmation (5) 33:17 54:3,8 67:12,14 confirmed (3) 33:18 61:18 80:8
confirming (2) 2:4 101:15
confirms (1) \(33: 16\) confused (1) 88:21 confusion (1) 86:8 connected (1) 100:14 consequence (1) 60:25 consider (3) 49:16 84:25 85:10
consideration (1) 17:3
considered (5) 21:6 36:22 77:3,6 84:21
consistent (1) \(39: 8\)
consisting (1) \(3: 23\)
construction (4) 10:15 84:4 85:15 86:10
constructive (1) 77:4 contact (1) 40:16
contained (1) 13:5
content (5) 63:5,7 70:20
71:3 91:23
context (2) \(50: 23\) 97:1
continue (6) 1:8 3:1 60:2
68:24 73:1 89:22
continued (4) 1:21 3:3 110:3,6
contract (18) 17:25,25 18:15
19:5 20:24 22:9 24:12,22
27:4,6,18 28:16 33:25 34:9
35:22 38:23 39:8,10
contractors (1) 91:15
contracts (1) 28:13
contractual (4) 28:18 29:7
40:13 41:1
control (1) 25:13
convenient (3) 29:18 80:2 108:19
conversation (3) 72:15,21 107:4
copied (2) 65:5 68:7
copy (4) 49:4 64:14 68:10 69:11
core (30) 3:25 5:20,20,23,23
6:2,2,10 11:14 12:17,17,21
13:2,12,23 31:3,25 41:4,13
56:9 57:23 58:22 79:10
81:12,17,20 82:1,6 107:7,9
cores (2) 11:18 107:15
correct (5) 49:17 63:13 72:8
99:5 106:19
corrected (1) 48:18

d0 (12) 4:15,16 57:14,19 65:25 74:4 75:13 86:23 87:2 88:9,13,18 d2 (1) 44:1 dangerous (2) 82:8,20 dark (1) \(53: 20\) data (20) 25:15,22 28:1,3 29:14 33:6 34:1,10,13,17
35:20 36:18,19 38:20 40:12 44:13,17 45:13
49:15 102:13
database (1) 99:16
date (21) 3:17,19 4:8
12:6,9,10,13
27:3,7,12,13,14,15,17 53:3
68:24 69:19 80:6,8 99:17
100:3
dated (4) 10:23 18:11
22:13,22
day (2) \(66: 18,25\) day893720 (1) 105:20 day893811 (1) 107:2 day91625 (1) 71:6 day91711 (1) 72:1 day9175 (1) 71:18 deal (1) 47:19 dealing (1) 90:9 deals (1) \(80: 22\) dear (2) 49:3 68:9 death (3) 50:7 51:24 52:11 debbie (1) 99:24 deborah (10) 8:1 69:22 70:2 90:1 96:22 97:9 102:21 104:9,14 105:1
debris (1) 4:15 december (4) 32:4 68:1 70:13 72:20 decide (3) 7:6 95:18 102:3 decided (1) 6:16 deciding (1) 98:10 decision (3) 6:19 9:7 85:17 decisions (4) 83:16 84:3,6 97:6
decorativeprotective (1)
54:11
deducted (1) 104:2 defined (2) 22:21 61:6 definition (2) 26:12 27:11 definitions (1) 26:17 delasreisz (1) \(60: 5\) delay (1) \(68: 17\) deleted (1) 23:7 deliberate (4) 45:17,21 46:7 76:13
deliberately (1) 72:23
delivered (2) 92:9,18
delivery (1) 49:11 demanded (1) 45:4 department (3) 96:16,20 101:13

\section*{depend (2) 52:5 91:23}
dependent (1) 7:21
describe (2) 11:10 90:19 described (5) 33:8 92:3 102:15 104:14 105:16 describes (2) 45:11 105:1 description (7) 3:22 10:12,17
11:16 56:6 63:15 65:8 design (2) \(84: 7\) 85:5 designations (1) 61:17 designer (1) 85:15 designers (3) 84:6 86:10 90:9 desire (2) 17:10,14 detail (9) 10:4 28:10,13 63:7,13 70:20 71:3 102:15 105:4
detailed (2) 70:14 99:12
details (6) 25:17 26:9 28:18 63:16 70:12 84:8 determined (3) 62:3 77:24 78:13
development (2) 96:24 107:9 developments (1) 21:7
device (1) 2:13
diagram (3) 42:15,21 81:5 diagrams (4) 56:23 81:15,16,25 dictate (1) 106:7 didnt (13) 14:20 18:23 19:1 20:19 40:6 46:15 47:13 50:18 72:24 93:19 98:21 100:20 105:2
difference (6) 6:11 42:3 47:21 51:23 52:10 87:24 differences (2) 17:6,6 different (17) 6:18 11:17,18 21:16 35:1 65:12 78:20,20 82:23 86:7 89:24 90:8 91:19 92:20 107:8,9,11 differentiated (1) 82:14 differentiating (1) 79:24 differently (4) \(35: 14\) 36:1 41:5,13
difficult (3) 40:4 103:1,2
difficulty (1) 17:11 diligent (1) 8:24 dimension (1) 43:23 dimensions (1) 65:18 direct (1) 5:25
directly (2) 29:12 97:13 director (15) 5:10 9:4 17:24 19:11,16,19,24 20:1 21:19 46:4 48:11 76:16 90:7 98:13 108:7

\section*{directorial (1) 19:8}
disastrously (2) 16:8 45:20 disclose (2) 25:9 28:3 disclosure (1) 19:3 discover (2) 40:10,24 discovered (2) 41:25 42:9 discussed (1) 71:13 discussing (1) 71:22 discussion (3) 14:25 45:6 105:19
discussions (2) 20:11 68:25 dishonest (1) 76:13 disjointed (1) \(37: 7\) disposal (1) \(39: 23\) distinction (3) 17:16 73:24 79:20
distribution (2) 96:14 101:13 document (73) 5:9 6:13 9:16,23 10:1 12:20 13:15,17,20,22 14:2,4 18:5,8,10,12,14,14 19:9 22:7 26:13 27:10 36:22 38:22 42:13,16,17,18,21 43:4,21 44:3,21,22 45:4 48:18 51:5 52:3 55:14 60:19,20 61:2,20 64:1,7 66:20 69:18 70:7 74:24 76:16,18 77:10 79:25

80:4,9,10,13,19 81:2,2,8,20 82:9,16,19 93:12,25 94:6,12,14 99:16 105:10,12
documentation (2) 19:3 28:16
documents (23) 2:8 18:22 20:21 21:9,12 32:3,8 35:5 69:5,20 93:15,16,23 94:7,15,16 98:10,18 99:9,13,14,17 100:13 does (14) 7:21 12:25 17:5,15 39:7 52:1 74:3 82:3 85:24 86:1 91:2 103:25 107:13,25
doesnt (4) 52:13 79:17 85:24 102:1
doing (2) 18:17 98:18 done (6) 37:1 38:17 39:7,14 100:20 106:16 dont (81) 5:11,17,24 6:14,17 8:4 12:8 14:1 17:8,9,13 18:7 20:25,25 21:5,11,11 23:13,14 27:21 31:12 35:16 36:2 37:8,19 40:4,7 42:6,7,17,18 43:7 45:14,14 48:5,6,7 51:25 53:12,12 55:18,19 61:11,23 63:15 71:19 72:22,24 73:9 77:8 79:4 80:18 81:1 82:13,15 83:11 85:24 86:6,16 87:10,14 93:4 94:11,12,13 97:25 98:12 99:19,23 100:6,25 102:6,19 103:2,9 104:1 105:5 106:23 108:4,17 109:1
door (1) 62:12
double (1) 22:4
doubt (3) \(36: 25\) 38:15 47:2 down (16) 22:15 23:1 42:24 49:6,6 54:14,18,21 64:10 69:17 70:1 83:15,22 84:16 101:2,4
draft (13) 48:10 49:4,19
51:10 64:16,19 68:11,13,17,20,22 69:21,21
drafting (2) 70:14 73:3 draw (2) 17:16 73:24 drawings (1) 11:15 drawn (5) 14:2,4 61:12 82:10,10
drawnout (1) \(37: 8\) droplets (1) 4:15 duragloss (10) 4:3 56:13 57:13,18 58:7 65:9,11 86:22,25 88:8 during (8) 2:17 20:4 41:25 42:9 46:16 68:16 72:21 88:22

\section*{e (3) 42:25 43:21 61:4} earlier (3) 12:10 33:24 87:12 early (6) 69:22 70:13 72:20
73:15 76:21 97:10 easy (1) \(54: 23\) edged (1) 56:11 effectively (1) 6:15 either (12) 3:24 12:17 15:25 18:13 23:16 31:6 35:12 47:15 56:9,11 96:21 108:13
elapsed (2) 70:22 72:23 electronic (2) 2:12 21:9 elements (1) 39:22 else (1) 6:16
email (29) 48:22,25 50:16,22 51:1 64:4,8,9,11,22,24,24 65:2,15 66:9,24 67:7,23,25 68:4 69:19,25 70:1,1 73:15 96:13 100:10 101:12,13 emails (7) 70:12 72:19 96:13 100:12 101:21 102:7,11 employed (1) 96:21
employee (3) 91:24 93:13 94:1
employees (3) 91:18,21 98:5 en (9) 3:15 31:22,25 57:15,20 78:18 86:24 87:3 88:10
en135011 (1) \(33: 12\) enclose (2) 64:14 69:10 enclosed (2) 66:20 68:10 end (7) 5:2 7:25 20:6 21:21 28:11 39:17 51:1
engineers (1) 84:5 england (8) 42:22 55:5 61:3,19 92:12 93:3 102:22 103:3
english (79) 3:12 6:22 7:2
9:20 10:5 11:6,20 12:2
14:11 15:13 16:25 18:1,3
24:3,8 25:2,8 26:2 27:1
28:5,9,12 32:17,21
36:8,11,15 38:12 42:12 44:9 52:2,23 53:8 54:22 55:2,15,16,22,25 56:18,23 57:6,10,10 58:12 60:23 61:25 62:25 63:18 64:7,7,25 66:10 67:6 68:4 70:3 71:7 74:17,18 75:3 78:4,7 80:21
83:3,8,9,16,25 84:17 86:18 91:9,13 95:21,25 96:1
100:22 101:2,7 103:4
enlarge (1) 26:17 enough (2) 63:18 73:10 ensure (2) 1:11 76:21 enter (1) 68:25 entered (2) 20:23 27:4 entirety (2) 81:1 87:15 entry (1) \(19: 5\)
errors (4) 49:23 51:14 73:17
75:20
essential (1) \(62: 9\) essentially (1) \(87: 19\) established (5) 35:2 77:1
82:16 97:21 98:2 establishing (1) 98:9 etc (1) 15:8
euro (1) 44:24
euroclass (8) 72:9 73:20 74:4,12 75:7 76:9 86:13 87:8
europe (1) 43:9
european (25) 3:8,15 16:9 35:8 43:10 44:2,15 45:3 47:7 57:16 71:17 72:4 102:23
103:3,6,12,13,13,15,17,20,25 104:6,10,15
even (6) 18:23 20:3 46:10
52:4 86:9 87:4
evening (1) 109:4 eventually (1) 41:7 ever (8) 5:12 9:23 18:8 33:19 42:18 80:13 98:7,9 every (2) \(28: 21\) 63:12 everybody (2) 11:1 95:6 everyone (6) 1:3,7,24 30:9 60:1 89:13 everything (1) 1:13 evidence (26) 1:9,22 2:1,5 13:11,23 30:2,3,10 31:5,9 34:20,24 35:19 59:20 60:2 82:24 85:13 87:13 89:8

11:3,7,11,21 12:3 14:12 15:10,13 18:2,4 24:4,8 25:7 26:3,18 27:1 28:6 32:18,22 33:8 36:9,11,12,14 38:3,5 48:18 52:20,24 53:5,7
54:5,16,17,23 55:7,15,15,17,25 56:2,19,22 57:6,9 58:13 60:24 62:1 63:1 64:2 65:2 67:12,15,19 68:3 69:22 70:2,4 71:8,8 74:16,19 75:3 78:4,6 80:19 83:3,4,7,17,23 86:19 90:1 91:10,13,25 93:1 95:22,25 96:2,22 97:9 99:24 100:23 101:4,7,24 102:21 104:9,14 105:1,16,23 106:19
fresh (1) \(62: 16\)
friday (1) \(66: 11\)
front (4) 26:20 27:23 49:9 51:8
ft (6) 14:1 39:22 40:2 46:18 82:9 100:14
full (3) \(25: 968: 2078: 25\)
funny (1) \(88: 15\)
further (6) 3:8 33:4 61:22 68:18 81:15 97:18
g (3) \(25: 6,25 \quad 26: 4\)
gap (7) \(5: 7\) 6:8,9,13,14,15,16
gathered (1) 18:21
gave (4) 20:3,15 47:6 94:5
general (12) 9:5 14:22 53:2
63:16,17 67:11 80:22
96:25 101:18,20 102:4 105:1
generality (2) 25:11 26:8
generally (6) 84:8,9 90:9
95:6 101:22,25
genuinely (1) \(45: 10\)
geometric (1) 43:22
get (4) 7:14 36:12 72:12 93:1
gets (1) \(50: 22\)
getting (1) \(50: 14\)
gg (1) \(64: 10\)
give (9) 20:20 29:14
45:12,25 46:15 76:4,4 99:12 108:14
given (11) 11:4 13:11 75:18 76:3 81:22 84:19 88:22 92:2 95:15 99:17 107:18
giving (1) \(2: 5\)
goes (2) \(36: 12\) 57:16
going (39) 1:8 2:1,3 6:18
9:16 10:3 14:22 15:12 22:5
24:20 29:21 30:1,18 32:23 37:25,25 42:11 48:8,24 50:17 51:4 56:20 59:6,16 62:20 64:25 65:1 71:6 82:23 84:16 86:1 88:3 89:1,6 96:1 101:7 105:21 106:18,25
goldcoloured (4) 4:4 57:18 58:7 86:25
gone (1) 108:20
good (22) 1:3,6,7,23,25 2:15
3:4,4,5 27:20 29:19 30:5,13,17 33:2 46:15 60:14 63:18 89:21 93:15 108:21 109:4
goodnight (1) 109:3
grade (1) \(56: 17\)
granted (1) 27:17
grasp (1) \(90: 24\)
greater (1) 91:25
green (5) 65:14,20
66:2,11,14
gregorian (6) 48:22 65:5 66:10,18,24 67:7
grenfell (13) 42:15 53:16 63:6 70:19 71:2,14,23

72:10 79:11 84:13,22 98:18,21
grey (1) \(58: 15\)
greygreen (4) 33:14 57:12
86:21 88:7
group (1) \(100: 10\) guarantee (1) 78:19 guess (1) 106:9 guidance (4) 42:23 81:24 84:24 85:6 guideline (1) 80:5
hadnt (3) 18:13 72:6 107:16 half (4) 38:7,9 46:23 92:14 halfday (1) \(91: 22\) halfway (2) 28:9 36:12 halted (1) 12:11
hamo (10) 48:22 65:5
66:1,10,16,18,19,24 67:5,7
handling (1) 49:12 handover (2) 20:3 21:14 hands (1) \(71: 10\) handwriting (1) 24:1 hang (1) 29:23 hangover (1) 12:10 happen (1) 102:1 happened (1) \(40: 7\) happens (1) \(37: 18\) happy (2) \(50: 16\) 70:6 havent (1) 81:2 having (16) 15:14 21:15,17,22 36:23 41:21 55:4 59:2 61:1,9 71:13 72:19 73:14 74:24 75:18 103:19
heading (5) 54:18 56:24 64:12 81:15 94:4 hear (11) 1:12,14,18 30:14 37:14,15 48:1 60:4,5,10 89:17
heard (7) 29:25 59:16 68:21
79:6 90:1,21 97:8
hearing (6) 1:4,9 37:7 60:2 89:14 109:7
hello (5) 30:17 60:11 65:6 66:19 70:5
help (13) 7:18 9:17 10:4 12:8 14:5 23:12 27:20 48:9 67:9 78:22,24,24 97:18 helpful (4) 49:14,25 51:9,16 hence (1) 7:5 here (19) 1:4 10:8 11:8,22 12:4 14:15 24:5 25:6 39:24 48:21 59:11 79:5 81:20 86:8 87:16 89:20 93:6,7 107:4
hereunder (1) 26:22
hes (2) 1:18 97:17 hide (3) 17:10,14 47:10 hiding (1) 47:13 higher (1) 4:9 highly (1) \(103: 20\) historically (1) 99:18 hope (3) 60:8,12 89:21 hr (1) \(94: 6\) human (1) 94:6
id (8) \(10: 1\) 32:21 \(38: 6\) 60:19
74:25 83:2 90:20 92:15 idea (2) 93:15 94:18 ideas (1) 21:16 identical (1) 13:18 identified (3) 13:2,5 23:10 identify (4) 23:16 24:15 36:23 99:16
ie (2) 15:3 78:11 ignore (1) 95:17
ii (1) \(22: 25\)
ill (29) 2:25 6:1 7:1 13:21 25:7 28:12 30:10 32:21 34:6 37:18 38:18 41:11 48:3,18,19 54:25 58:12 60:3,23 67:3 68:4 69:14,20

70:3 78:7 82:18 91:12,13 92:24
im (73) 1:4 2:3 5:12 6:18 8:7 9:16 10:3 13:19,20,21 14:17,22 15:12 24:20 30:16,18 32:23 37:5,13,21,25,25 42:11,19 44:8,24 46:3 47:4 48:8,24 50:14,15,16,17 51:4 53:4 55:22,24 59:13 62:20 64:25 65:1 68:2 71:6,9 73:1,9 75:11 78:24 79:23,23 82:14,23 83:18,20 86:16 87:14 88:2,3,21 89:1,20 90:15,22 96:1 98:25 101:7 104:19 105:12,21 106:18 108:19,23

\section*{image (1) 49:9} imagine (6) 16:24 39:21 52:23 79:5 97:17 102:14 imagining (1) 102:16 immediately (4) 22:19 26:4 36:21 68:23 impact (1) \(52: 1\) important (1) 45:1 impossible (1) 43:12 impression (1) 72:12 improve (1) 77:5 inaccurate (1) 49:16 include (4) 25:17 29:13 49:8 92:11
included (1) 33:6 includes (3) 91:19 96:15,19 including (10) 25:10 26:8
62:17 84:7,24 85:2 91:17 96:6,17,22
incorporated (1) 62:7
incorporating (4) 62:3 77:24 78:10 79:9 independent (1) 47:18
index (3) 10:19 58:16 110:1 indicate (1) 2:19 inference (2) 12:9 102:16 infill (1) 10:14 inform (1) \(35: 23\)

\section*{informal (1) 20:3}
information (40) 17:1 26:6 28:20 30:22 33:5 35:24,25 36:3 45:1 46:15,16 47:7,23 49:11,13 50:5 51:8,21 52:9,14 69:9,11 85:16 89:25 91:20 92:8,9 95:15,18 97:2,4 99:5,6 100:14 105:13 106:2,12 107:18 108:10,17 informed (2) 33:7 36:17 initial (1) 23:20 initials (4) 19:10 23:12,23 \(24: 9\)
inquiry (6) 3:3 5:18 72:2 85:14 94:17 110:5 inquirys (2) 12:9 19:3 instead (2) 5:20 65:9 integrated (1) 15:5 internal (1) 96:17 interne (4) 96:15 100:11
101:14 102:8 interpret (1) \(34: 5\) interpretation (2) 92:23 100:17

\section*{interpreted (287) 1:23}

2:6,9,14,20,23 4:18 5:6,11,14,17,24 6:3,7,12 7:9,12,16,20,24 8:3,7,9,13,16,19,23 9:1,9,25 10:21,25 12:18,22,24 13:3,7,15,18 14:1,6,9,20 15:18,21,23 16:2,10,17,24 17:8,18,21 18:7,9,16,20 19:1,6,9,15,18,21,25 20:4,14,17,22,25 21:5,11,20,24 22:2,12,18,23 23:9,13,22,25 24:17,24

25:4,24 29:3,8,12,16 30:16 31:4,12,16 32:6,10 34:12,15,18,23 35:4,10,16,22 38:6,22 39:10,15 40:2,14,18 41:2,18,20 42:6,17 43:5,7,20 44:3,6,16,22 45:5,9,14,21,24 46:8,11,13,24 47:4,17 48:1,5,7,15 49:21,24 50:2,6,9,12 51:3,12,15,18,22,25 52:12,16 53:9,12,15,22 54:1,20 55:13,18 57:4,24 58:3,11,20,24 60:10,13 61:14 62:14,24 63:11,14,19 70:16,21 71:4 72:5,11,18,22 73:2,9,18,22 74:2,6,9,14,17,21,25 75:9,16,24 76:5,10,15,19,25 77:8 79:4,12,19,23 80:12,14,16 81:8,11,13,18 82:2,9,22 84:2 85:20 86:2,6,14 87:9,11,14 88:2,20 89:20 90:5,11,13,20 91:1,4,7 92:6,14,22 93:4,17,19,21,25 94:4,11,18,21 95:3,6,10,16,20 97:16,22,25 98:3,8,12,17,21,25 99:6,11,19 100:1,4,12,19 101:6,23
102:6,10,14,18,20 103:1,9,22,24 104:12 105:4,17 106:23 107:11,14,24 108:4,9,17 109:4
interpreter (17) 1:22 15:11 28:25 34:4 41:8 50:21,25 65:3 66:5,7 69:14 83:11,18,20,24 88:14 101:18
interpreters (4) 1:12 30:11 60:4 89:15
interrupt (5) 29:22 37:5 50:20 90:15,22
into (14) 14:11 15:4 16:21
17:2,22 19:5 20:23 27:4 63:15 65:2 68:25 71:8 91:25 105:23
introduce (2) 20:12 64:7 introduction (1) 20:15 investment (2) 97:6,7 invite (2) 2:25 30:18 inviting (1) 13:21 involved (7) 8:10 9:6 14:6

17:11 20:5 70:14 73:3
ireland (2) 61:5,23
irrelevant (2) 95:19 103:6 isnt (10) 32:19 49:17 51:6 55:16 57:25 58:2,8,21,22 70:20 iso (1) 77:1 issued (5) 52:19 55:14,17 69:10,11
issues (1) 85:9
istephan (2) 1:5,6
its (73) 6:20 8:4,18 11:3 12:16 15:7 16:21 25:11 26:7 27:25 28:20 29:10,19 30:23 31:18 32:20 38:1 40:3,13 41:1 44:10 47:5,17 48:2 49:17 51:6 54:15,16,22,23 55:22 59:2 63:7 64:8,24 65:4,22 70:20 72:8 75:9,11,12 80:2 83:22 85:1,2,10,21,22,25 87:15 88:21 89:2,2 91:2,15,16 92:20 93:14,25 94:6,25 96:21 98:17 101:1,4 103:1,1,4 104:2 105:3,12 107:14
itself (1) 48:9
ive (24) 5:8 6:12 11:4

12:14,15 27:18 37:19 41:8 42:18 58:4 62:15,22 65:7 67:23 70:12,17 73:12 77:13 78:2 79:6 87:5 98:16 101:23 104:23
january (5) 53:4,10 68:21 69:23 70:2
job (6) 29:9 63:9,12,14,17 104:11
jointly (1) 39:4
july (3) \(20: 5\) 21:21 \(22: 6\) june (5) 20:6,6 80:2,6 105:20
keeping (1) \(100: 2\) kennedy (3) 1:14 30:12 89:17
kept (1) \(48: 4\)
key (2) \(54: 14,19\) kind (2) 93:12 94:12 kinds (1) 99:9 kingdom (4) 92:12 93:2 103:7 104:7
kingdoms (1) 92:25
knew (6) 15:16,24 16:6,6
45:18 76:3

\section*{know (83) 5:22}

6:1,5,10,14,17 8:4 15:6 16:4,10,21 18:18 19:4 23:13,15 27:21 28:17,19 31:12,21,23,24 32:1,5 34:22 35:3,5 36:2 37:8 39:12 40:4,7 42:6,7,17 43:1 45:2,6,14,14,25 48:5,6,7 53:12 55:18,19 61:13 62:20,21 63:10 68:23 69:20 72:3,22,24 73:9 77:8 79:4,7 82:15 85:1,17 86:6 93:4 94:11,13 97:25 98:12,22 99:19,23 100:2,6 101:17
102:6,12,19,19 103:2
105:5 106:23 107:7
knowing (1) 17:4 knowledge (9) 31:12 35:5 37:3 91:6 94:7 99:4,8,22 100:7
known (3) 35:11 82:4,4
laboratories (1) 93:11

12:3
met00053158p15188 (1) 48:17
met00053158p1615 (1) 63:25
met00053158p16155 (1) 68:2
met00053158p16157 (1) 69:18
met00053158p16165 (1) 69:24
met00053158p1617 (1)
64:18
met00053158p1635 (1)
64:23
met0005318715 (1) 95:22 met0005318729 (1) \(83: 3\) met0005319016 (2) \(36: 9\) 63:1
met0005319017 (2) \(28: 5\) 78:4
met0005319022 (1) 6:22 met0005319034 (1) 100:23 met0005319036 (1) 91:9 met0005319046 (1) 14:12 met0005319048 (1) \(32: 17\)
metal (2) 4:1 5:4
metallic (1) \(58: 15\)
method (4) 25:13,18 78:15 82:7
methodologies (1) 82:5
microns (1) 4:3
microphone (1) \(37: 9\)
middle (2) 59:1 104:21
might (5) 8:17 41:7,15 82:7 98:25
millett (39) 2:25 3:2,4 15:12 29:4,17 30:18,20,21 34:6 37:5,13,17,21 41:11 50:14,20,24 58:25 59:5,11,14 60:15,16 65:4 66:6,9 69:16 83:13,19,25 88:16 89:1,5,23 90:16,23 101:19 108:19
millimetres (5)
6:9,10,14,15,17
mind (3) 62:16,19 94:13
minimum (3) 5:7 6:14 49:10
minutes (1) 108:20
misleading (7) 16:15 46:23
74:8,10 75:5,12 76:23
missed (1) 92:23
missing (4) 42:2 49:13 51:8 95:7
mm (3) 5:7 11:18 56:8 mobile (1) 2:11
mock (1) 78:12
modifications (1) 97:1
moment (6) 2:2 29:18 37:15 90:15 104:6 108:19 monday (3) 9:25 18:9 48:23
month (2) 20:6 66:1
months (2) 17:23 22:4
moorebick (34) 1:3,8,16,25 2:7,10,15,21,24 29:21 30:9,13,17 34:4 37:5,15,20 50:20 59:5,13,15 60:1,7,11,14 83:22 89:4,13,18,21 90:15,22 108:21 109:5
more (10) 13:21 24:21 30:19 48:3 53:2 88:3 93:14 102:15 105:5 108:12 morning (12) 1:3,6,7,23,25 2:17 3:4,5,5,7 43:19 108:25
most (3) 86:9 87:4 101:25
move (1) 77:17
ms (10) \(1: 5,6,14\) 30:12 60:5 89:17 93:1 105:1,16 106:19
much (15) 1:16 2:15 3:12 30:13 40:21 45:22 48:3 52:23 59:22 60:7,14 67:9 89:18,23 97:11
must (1) \(46: 16\)
mustnt (1) \(70: 22\)
mutually (1) \(25: 19\) myself (5) 28:15 40:15 58:25 100:20 101:10
me (2) \(10: 9\) 19:20 namely (4) 16:8,20 45:19 105:2
national (4) 44:1 62:8 103:19 104:8 naturally (1) 29:19 nature (1) 23:3 necessarily (5) 77:4 88:24 91:4 93:9 99:12 necessary (12) 1:13 7:23 11:3 20:19 36:25 38:16 39:6 77:16 92:10 106:4,7,8 need (8) 1:11 2:18 16:25 59:3 61:24 90:24 93:4 106:16
needed (3) 33:5 106:9,21 neither (2) 75:10 85:4 never (9) 5:14 10:1 18:12 20:15 41:23 43:1 47:6 55:16 85:10 next (8) 1:17 24:15 56:21 57:10 66:9,24 83:22 107:1 nf (1) \(3: 15\) nicolas (1) \(28: 15\) nobody (1) 43:6 none (1) \(31: 13\) nor (2) 84:12 107:17 norm (1) 16:9 normal (3) 21:7 69:7 95:12 normally (2) 90:19 99:9 northern (2) 61:5,23 note (2) 13:9 97:4 noted (1) 96:23 notify (2) 26:4 96:12 noting (1) 33:2 notion (1) 41:20 november (10) 14:15,25 64:9 65:5 66:11,25 67:8,24 70:12 72:20
number (13) 3:15 17:23 22:4,10 27:19 32:13 33:13 59:9 67:16 75:19 78:23 84:7 96:5
numerous (2) 28:17 46:17
obligation (1) 29:13 obligations (5) 25:2 29:7,10 40:13 41:1
obligatory (1) 95:4 obliged (1) 34:16 obtain (3) 6:19 25:16 88:25 obtained (12) 7:4,7 36:1
76:9 87:16,18 88:13,18,23
101:10,16 103:16
obtaining (1) 21:3 occasions (2) 69:6 97:5 occupying (1) 76:22 occurs (1) 91:19 oclock (4) 59:18,22 108:25 109:5
october (4) 3:18 4:8 48:10,23
officially (1) 21:20
officials (1) 4:8
ok (1) 33:17
okay (15) 15:12 19:13 23:18
38:12 41:19 44:9 53:16
66:7 74:22 77:9 78:6 79:20
80:13 90:20 94:22
omission (1) 74:7
omissions (4) 49:23 51:14 73:17 75:20
onboarding (1) 91:21 once (13) 5:10 17:10 39:1,15 48:1 51:25 69:9 72:23 82:14 95:1 106:15,21 108:9
ones (1) 10:22
on 97:19
opening (1) \(81: 17\)
openings (1) 62:13
operator (1) 4:10
opinion (1) 70:23
opportunities (1) 75:19 opportunity (1) \(77: 6\) opposed (3) 42:4 78:12 82:24
order (4) 7:7 28:20 33:5 81:6 organised (2) 28:16 108:5 original (1) 97:23 osman (3) 64:8 65:4 68:7 osmans (1) 69:19 others (2) 68:7 101:10 otherwise (1) 46:18 ought (1) 74:19 oui (3) 10:11 19:14 24:14 outcome (1) 78:19 outside (5) 9:12 65:12 93:5 96:17,20
over (20) 17:23 20:1
22:4,5,6 28:14 36:12
43:9,23 53:5 54:11 59:20
89:8 95:25 104:18 105:25
107:5,15 108:20 109:1
overall (1) 17:4
overrun (1) 108:23
overseas (1) 7:6
own (7) 35:5 39:15 99:4,8,22 100:7 103:4
p2391 (1) \(33: 19\)
package (1) 20:20
paid (2) 27:5 62:10 painstaking (1) 8:21 paints (1) 93:11
panel (8) 1:5 3:5,23 11:12 33:7 36:18,19 38:1 panels (18) \(17: 5\) 23:6,8,15 33:4 53:20 54:4,9,10 55:4,8 56:8,10,25 64:12 82:21 84:20,22
paper (1) \(21: 9\)
paragraph (57) 4:11
6:22,23,25 10:16
14:12,13,14 15:14 26:16 28:6,7,9,11,11
32:18,19,23,24 33:1 36:10 37:23 38:4,14 42:25 49:2,6 51:7 58:5,12 63:2,3 70:18 75:2,4 76:7 78:5,6,9 79:15 83:2,5,10,12,13 84:14,17 86:17,20 88:4,6 91:11 95:23,24 100:24,25 104:1 paragraphs (2) \(33: 11\) 50:18 parallel (2) 9:12 104:7 parameters (1) 4:23 part (20) 10:18,19 12:15 19:2 21:6 36:16 42:13,21 43:24 47:10 48:16 64:6 74:15 83:4 84:22 91:21 95:12 97:3 101:1 102:7 particular (12) 7:13,19 43:15 61:18 62:10 73:24 78:18 84:10 91:23 92:5 94:9 99:17
particularly (2) 38:14 59:4 particulars (4) 25:9,11 26:5 29:14
parties (2) 26:5 85:9 parts (1) 48:25 passed (3) 13:12,24 107:16 path (1) 93:21
pathways (1) 62:10 pause (23) 15:9 16:16,23 29:2 32:9 38:11 50:11 51:2 55:11 58:9 64:5 66:8 67:22 69:15 70:11 80:25 83:21 85:19 88:1 98:24 102:25 103:21 104:24
pausing (4) 49:17 58:21
pe (53) 5:19,23 6:2,10 11:18 12:17 13:12,23 16:4 31:7,22 32:5 33:7 35:1,7,13 36:18 39:13 41:4,13 43:3 44:13,20 45:3,20 46:22 47:3,14 57:23 58:2 73:21 74:1,4,12 75:6,14,22 76:8 78:17 79:10 81:12,17,20,23 82:6,13,19 84:12,21 85:25 86:12 87:7 104:17 pecore (1) 13:5 penultimate (1) 11:23 people (10) 21:15,17,22 22:2 23:17 46:13 52:13 93:11 95:7 96:5
perfect (3) 77:4,5 80:5 perfectly (2) 37:16 43:11 perform (1) 5:20 performance (21) 10:17 12:20 13:2 17:6,16 34:25 35:1 42:3 46:21 47:3,21 62:2 73:25,25 77:23 78:10,11 91:16,17 96:4 106:13
performances (1) 61:16 performed (7) 6:5 16:8,13 35:13 41:5,13 45:20 perhaps (2) 95:1 104:22 period (7) 21:19 39:4 46:16 99:10,11,25 108:8 person (3) 40:15,20 94:5 personally (1) \(102: 7\) personnel (1) 93:24 persuaded (1) \(59: 13\) pertaining (1) \(32: 8\) phone (1) 2:11 physical (1) \(25: 12\) pick (5) 26:12 41:7,15 80:2 83:15

\section*{picture (1) 50:23}
piece (1) 45:1
place (7) 15:1 22:5 31:18 39:1,3 40:15 76:20 plain (1) \(56: 11\) plant (1) 9:13 please (86) 2:11,19 3:10,20 4:5 5:3 6:22 9:18,21 10:5 11:10,11,15 17:15 18:1,2 19:20 22:8,25 24:3,7,10,19 26:2,13,24 27:1,12,21 28:7 30:2,2,25 32:16,18,22 34:5 36:8 37:24 38:10,13 42:10 48:12 49:8 51:1 52:19 55:10,21 58:13 59:18,19 60:18 63:2 64:4,18,22 65:2 66:4,6,14,20 68:6,10,23 71:11 78:4 80:17 83:1,8,14,19 84:14 86:20 88:4 89:7,7 91:9 95:21 96:2 100:7,21,22 101:8 108:25,25 109:5 plumb (1) \(58: 25\)
pm (6) 59:2,23,25 89:10,12 109:6
pointed (3) 49:23 51:14 73:16
points (2) 49:18 51:7
policy (2) 41:3 102:4
polyester (2) 56:15 65:13
polyethylene (3) 3:25 11:14 56:10
position (3) 45:19 76:22 101:20
positively (1) 75:12 possible (4) 21:14 43:8 54:17 84:25
potentially (4) \(51: 23\) 52:6 92:22 93:14
precise (6) 18:24 63:7 70:19 71:2 73:10 75:16 precisely (2) 93:14 94:13 precoated (3) 3:23 11:13 38:25
predecessor (1) 19:23
predicament (1) \(59: 7\)
preferred (1) 40:24 prejudice (1) \(25: 10\) preparation (1) 108:14 prepared (2) 18:20 94:20 preparing (3) 5:15 8:21 9:11 presentation (1) 95:11 presented (3) 20:7 29:1 97:5 presenting (1) 46:20 president (2) 1:9 46:4 presumably (1) \(59: 9\) presuppose (1) 88:24 pretended (2) 74:11 75:5 pretty (1) \(37: 11\) preventing (1) 62:11 previous (6) 18:10 39:3 50:13 52:2 90:21 92:19 previously (2) \(35: 23\) 38:23 price (3) \(22: 14,15,16\) primer (2) 56:15 65:13 principal (1) 62:15 principle (2) 77:2 93:12 printer (1) 69:12 probably (21) 14:4,9 34:18 40:18,19,20 46:15 58:3,24 59:6,7,16 80:14 82:12 87:21 88:21 89:2 92:9 94:12 97:17 108:4 problem (3) 37:10,22 41:20 problems (1) 69:6 procedure (2) 2:3,16 procedures (1) 25:16 proceed (3) 37:17 68:23 69:2 process (7) 23:3 25:12 28:21 39:19,24 40:11 91:22 processes (2) 28:22 77:2 product (57) 3:22 4:23 7:19 10:9 11:10,10 14:16 15:3,4,7 16:6,13,21 17:1 23:3 31:8 38:25 39:19 44:20 48:13 52:4 53:24 57:12,17 58:6,14 61:17 62:3 64:15 68:12 75:13 77:24 78:10,15 82:12 84:10 85:1,3,11,22 86:21,25 87:16,18,20 88:7,23,24 90:25 95:14 97:1 103:18 104:11 107:9,16,20,22 production (5) 4:14 8:10 20:18 31:18 80:8
regimes (2) 92:11 93:2 region (3) 7:13,19 43:15 regular (1) 35:18 regulation (3) 52:2 103:3,4 regulations (12) 42:14,23 43:17 52:7 55:3 61:3,4,7 62:9 84:23 85:6 92:17 related (8) 18:22 \(33: 14\) 42:23 43:17 58:1 73:20 78:15 92:1
relates (2) 54:3,8
relating (9) 18:11 20:21
25:10 28:18 31:23 32:3
49:11 50:12 52:13
relation (19) 34:13 48:13 53:19 54:22 55:1,3 57:8 60:21 61:2,23 72:9 78:9 86:5 91:16,17 92:2 96:3 97:6 104:10
relationship (2) 18:18,24
relatively (1) \(36: 20\)
relevant (21) 28:19 31:15
35:20 36:20,23 43:13 44:18 45:1 64:6 84:23 85:6 91:21 92:4,12 95:14,18 102:13,23 103:20 104:11 107:21
reliant (1) 7:5
relied (1) 103:3
rely (2) \(28: 18\) 85:8
remain (1) 69:6
remarks (1) 65:7
remember (18) 10:24
20:2,6,9 21:11 30:3 34:2,11 61:10 72:24 73:8
80:15 89:7 95:4,8 97:20 98:1 104:2
remembered (1) 72:6
remembering (1) \(72: 15\)
remind (3) 27:23 28:2 59:19
reminder (1) 77:22
remit (1) \(85: 10\)
remy (1) \(28: 15\)
repeat (2) 88:15 92:15
repetition (1) 92:19
replaced (1) 22:2
replied (1) \(36: 21\)
reply (2) \(36: 19\) 45:24
report (21) \(3: 14,18\) 5:8,16,21
31:7,17,22,25
33:13,15,21,22,23 36:20 66:1,3 67:2 96:12 101:3,9
reports (11) 10:20,22
31:1,8,10,14 33:20 37:1 38:17 39:6 101:16 represent (1) 77:6 representation (1) 86:3 representative (1) 46:21
request (1) 68:16
requested (1) \(36: 5\)
requesting (1) \(33: 20\)
requests (2) 49:19 51:10
require (2) 91:2,5
required (8) \(27: 6\) 34:1,9
36:17 43:17 50:15 62:8 97:2
requirements (2) 56:12 68:20
requires (1) 28:20
research (4) 10:20 11:25
96:24 98:18
resend (1) 66:4
resistance (7) 62:2 77:23
78:9 79:16,21 82:17 87:24
resolution (1) 49:10
resources (1) 94:6
respect (5) 26:21 84:24 91:17 97:7 104:16
responds (1) 66:17
response (4) 33:11 49:8 64:21 66:14
responsibility (3) 29:6 48:14 69:7
responsible (5) 9:13 43:3
91:24 93:11 100:2
restricted (1) 21:13
rests (1) 69:8 resubmission (1) 68:17 result (8) 45:11,12,12 68:18 74:4 82:7 87:18 108:3 results (7) 39:13 47:16 65:24 96:4,8 105:3,8 resume (5) 2:1 30:2,10 89:14 108:24
retardant (5) 11:19 57:17 58:6,14 86:24 retrieved (1) 64:2 review (3) 27:5,14 67:17 revisit (1) 77:15 reynobond (72) 3:9,17 6:5,20 8:2 10:9,13,23 11:12 12:6,17 13:6,12,23 15:2,3,16,25 16:4 20:16,21 21:4 31:7,8,25 32:5 33:3 35:1,7,13 41:4,13 43:3,9 44:11,13,20 45:3,20 46:22 47:3,14 48:13 53:19 54:4,9 56:7,25 57:22 58:1,8,22 60:18 64:12 65:25 66:20 74:12 75:6,22 76:8 79:10 80:4 81:23 84:12,21 85:25 86:5,12 87:7 104:11,16 106:13
reynolux (6) 8:6,10 38:25 39:16,17 61:12 righthand (4) 26:25 43:25

\section*{81:8 84:15}
rigorous (1) 69:4
rims (1) \(10: 15\)
risk (7) 41:9,21 42:2 55:5
61:5 82:20,21
risks (1) \(82: 1\)
ritter (8) 19:11,13,15
23:11,19,24,25 24:17 rivet (23) 3:9 15:25 17:7,16 33:14,16 35:2,14 36:24 41:5,14 42:4 46:20 47:15,22 73:21 74:1,5 75:22 76:8 88:12,17 103:16
riveted (7) 4:1 5:4 31:23 56:11 57:2 75:10,14 rivetfix (4) 6:4 16:14 35:9 \(58: 2\)
rogue (2) 45:11 108:2 role (13) 8:10,11 19:23 20:1 21:15,17,19,22 82:24,25 84:19 90:7 91:23 roof (1) 10:14 room (3) 2:4,8,12 roughly (1) 79:7 round (2) 2:18 86:7 rts (1) \(37: 18\) run (5) 29:22 67:23,25 69:25 70:1
running (2) 41:21,21 runup (1) \(34: 5\)
s1 (1) 4:14
s341014 (2) 22:11,22 safety (9) \(50: 5,12\) 51:21 52:9,12,13,14 84:24 85:7 sales (27) 7:6,22,23 47:24 91:18,25 92:18 93:24 95:1,9,10,12
96:6,6,7,10,12,15,17,18,19 97:3 100:9 101:12 105:3 108:5,15
salesforce (7) 43:15 92:25 94:3,9 95:17 107:18,21 salesforces (6) 90:8,23 91:2,5 98:2 106:20 salesman (1) 92:18 salespeople (5) 89:25 92:3 94:24 95:13 97:13 salesperson (6) 7:13,18 93:6 99:23 102:21 108:2 same (22) 2:16 11:24 16:13 21:15,15,17,17,22,23 23:14 25:16 35:24 36:7

66:18,25 68:1 78:20 79:17 85:3,21 88:25 105:24 sample (11) \(33: 22\) 57:12,17,22 58:6,14 69:4 78:18 86:21,25 88:7 sas (13) 15:5 \(28: 14\) 33:7 84:9,11 85:4,8,11 91:14,18 96:3,5,21
sass (2) 15:2 84:19 satisfactorily (1) \(37: 16\) satisfied (1) 68:22 satisfy (2) \(68: 19\) 69:1 save (1) \(25: 18\) saw (14) 5:14 6:9 9:25 16:3 18:6 22:24 33:24 34:8 38:22 39:9 65:22 80:15 100:12 105:10 saying (2) 44:3 79:5 schedule (1) 95:12 schmidt (69) 1:9,17,20,21 3:6,7 15:15 17:13 18:5 24:21 27:19 29:5 30:1,14,17,22 32:22 37:4,21 38:5 40:22 42:1,12,19 44:24 46:3 47:16 48:8 52:11,21,25 54:5 56:4,22 57:9 59:15 60:2,8,11,17 62:17 63:9 71:21 72:14 74:18 76:2 77:7,12 78:6 80:7 83:2,25 85:13 86:8 87:6,23 89:6,14,19 90:17 94:15 96:1 101:21 103:5,15 104:25 106:19 108:23 110:3
schmidts (1) 30:10 scope (2) 15:1 53:24 scotland (3) 55:6 61:7,23 scratched (1) 24:13 screen (10) 18:3 38:1 42:24 51:7 52:19 54:16 56:3 83:7 84:16 95:25
scroll (6) 4:10 24:7 42:24
54:18 55:25 84:16
scrolled (1) \(56: 19\) searching (1) 98:17 second (11) 38:6,9 50:17 53:5,6 55:8 58:4 64:9 69:25 92:14 95:20 secondhand (1) 99:6 secret (4) 104:17,18 105:25 107:5
secretive (2) 105:2,15 section (18) 4:20 10:8 11:8 22:25 25:2 33:15 49:11 55:6,9 57:7,8 59:4,4 60:21,22 67:3 77:17,20 sections (2) \(60: 25\) 62:15 see (110) \(1: 13,14,18\) 3:12,16,21 4:2,4,7,11,17 5:3,5,9 6:4,8 10:4,8,10 11:8,15, 17,23 12:1,4 19:10,16 22:9,14,14,15,17,20 23:2,13,20,22,22 24:5,8,11,13,19 25:1,3,4,23 26:14,16,24 28:8 30:14 32:14 36:6 37:17,18 43:22 45:13 46:24 48:21 49:2 52:14,15 53:3,4,6,8,10,14,16,18,20,25 54:13,18,18 55:6,21 56:13,23 57:3,7 59:22 64:19 65:9,14 67:7 69:18,25 74:14 76:1 79:16 80:10,22
81:5,9,12,14,16,24 84:15 87:12,13 89:9,17 97:18 100:21 101:6 103:24 105:5 seeing (1) 109:2
seem (1) 100:15
seems (2) 37:21 88:23 seen (22) 5:12 6:12 9:23 10:1 12:19 18:8,12,13 31:1,5,9 34:19 35:6 38:2 42:18 43:1 73:14 77:13

80:13 81:2 100:17 108:13 seize (1) 59:12 sell (3) 7:8,18 43:18 selling (4) 43:3 90:25 91:3 94:9
send (6) 66:1 68:13 69:12 70:8 106:17,20
sense (1) \(59: 8\)
sensible (1) 29:24
sent (10) \(30: 23\) 32:7 36:19
69:21 76:17 96:13
101:12,21 102:3 105:11
sentence (4) 6:24 38:14 58:4 90:21
separate (1) \(39: 12\) separately (1) \(35: 9\) september (1) 10:23 serious (1) 47:2 server (1) 98:4
session (1) 91:22 set (4) 4:24 6:8 21:8 98:13 sets (1) 14:15
shaded (2) 43:23,24
shall (8) 2:17 25:5,19 28:3 30:2 66:5 68:13,22 shape (1) \(43: 22\) shaped (1) 15:20 share (2) 106:2,12 shared (2) 21:19 106:14 sheet (1) \(93: 12\) sheets (3) 3:24 11:13 56:9 short (6) 21:14 30:1,7 59:24 89:6,11
shortly (1) \(48: 3\)
should (20) 7:14 15:3 21:14
32:7 38:23 39:11 43:4 52:24 61:18 62:7,9,10 64:1 69:1 81:19 82:4 94:19 96:23 102:3 104:22
shouldnt (1) 102:5 show (22) 6:24 9:16 25:5 28:4 42:11,25 48:19 49:1 50:17 59:3 62:18 63:23 67:25 69:20 74:18 77:10 79:25 81:17 91:12 100:25 105:18 106:25
showed (8) 6:13 10:22 13:8 44:19 45:2 52:2,3 85:18 showing (3) 5:12 44:13 78:24 shown (20) 5:8,16 12:14,15 15:14 27:18 38:8,9 58:4 59:2 60:19 62:22 67:23 70:12,17 71:5 72:19 73:13 74:24 78:2
shows (1) 13:20
side (12) 3:24 11:14 24:25 26:15 43:25 52:22 56:9 61:8,11 66:10 81:8 84:15 signage (1) \(31: 8\) signature (7) 12:4 23:14,15,20,22 24:15,15 signatures (4) 4:7 23:10,11,17
signed (4) 19:9 22:13 24:12,16 significant (2) 49:23 51:14 signs (1) \(12: 5\) simmons (1) 105:19 simple (1) 92:24 simpler (1) 82:18 since (3) 20:18 67:16 77:1 single (1) \(33: 22\)
sir (38) \(1: 3,8,16,25\) 2:7,10,15,21,24 8:7 28:25 29:21 30:9,13,17 34:4 37:5,15,20 50:20 59:5,13,15 60:1,7,11,14 66:5 83:22,24 89:4,13,18,21 90:15,22 108:21 109:5 site (4) 36:3 49:12 92:7 93:7 sitting (2) 76:2,2 situation (1) 39:20 six (2) 32:25 101:4 skipping (1) 49:6 skips (1) 95:25
slowly (1) 48:21 smoke (1) 4:14 sold (3) 20:13 43:9 94:25 somebody (2) 23:6 40:19 someone (2) 65:14 93:5 something (7) 6:15 37:6 41:23 77:3 92:22 102:3,4 sometimes (4) 22:3 101:12,17,22 sort (2) 98:5 105:13 sought (1) 33:17 sound (2) \(37: 7\) 88:14 source (1) 98:15 southgate (5) 8:1 28:15 69:22 70:2 92:25 speak (2) 1:12 89:8 speaking (1) \(37: 7\) specialist (1) 99:20 specific (9) 7:14,17 18:21 49:19 51:10 92:7,7 97:5 101:23
specifically (5) 6:20 20:17
73:2 92:13 93:3 specification (3) 22:22 56:1,4
specified (9) 22:19
26:7,10,12,20,20 27:13,15,17
specifier (4) 50:1,3 51:17,19 specifiers (1) \(52: 4\) speculation (1) 102:17 spell (2) \(13: 119: 20\) spend (1) 9:11 spread (2) 58:18 62:11 staff (1) \(91: 15\) stage (3) 13:10 69:2 80:3 stages (1) 69:5 standard (17) 3:8,15 13:13,24 31:2 33:7 36:18 57:12,22 74:12,13 75:14 79:1 86:21 87:7 88:7 103:19
standards (1) 61:22
start (4) 6:21 9:19 42:7 48:10
\begin{tabular}{|c|c|c|c|c|c|}
\hline too (4) 26:18 37:9 45:21 & 109:7 & 78:25 92:3 96:10 99:1 & 100 (1) 79:6 & 2021 (2) 1:1 109:8 & 7 (6) 10:19 11:21 25:1,2 \\
\hline 50:9 & update (5) 33:1 95:8,14 & 21 105:6 & 1000 (1) 1:2 & 2041081 (1) 67:13 & 31:2 100:23 \\
\hline took (7) 15:1 17:23 20:1 & 104:10 106:9 & wehrles (18) 6:21 14:11 & 101 (1) 59:2 & 2071244 (1) 67:15 & 72 (2) 6:22,23 \\
\hline 22:5,6 31:18 77:2 & updated (6) 96:11 99:14 & 15:15 16:19 29:6,9 32:16 & 103 (1) 59:23 & 21 (3) 11:8 24:13 78:4 & 7a (2) 27:23 39:8 \\
\hline tool (1) 98:4 & 101:3,9 106:20 107:19 & 37:23 40:19 48:16 62:25 & 10cm (2) 49:10,10 & 22 (4) 22:13,22 48:23 64:9 & \\
\hline toolbox (23) 96:9,11 & updates (3) 100:15 102:23 & 63:9,24 64:21 76:22 78:3 & 11 (3) 56:7 72:1 107:2 & 23 (4) 65:5 66:11,25 67:8 & 8 \\
\hline 97:8,10,12,15,20,23 & 104:15 & 91:893:10 & 1115 (1) 2:18 & 24 (1) 32:18 & \\
\hline 98:1,7,10,16,19,23 & upload (1) 96:11 & welcome (5) 1:3 30:9 60:1 & 1117 (1) 30:6 & 25 (2) 33:12 71:12 & 8 (2) 67:11 68:21 \\
\hline 99:3,9,18,24 100:2,9 & uploaded (1) 100:9 & 68:12 89:13 & 1135 (3) 30:2,5,8 & 29 (2) 83:2,8 & 8414 (1) 79:1 \\
\hline 101:11,15 102:12 & upon (2) 7:22 91:23 & welsh (1) 42:13 & 116 (1) 100:24 & 2c (1) 61:6 & \\
\hline topic (3) 6:18 82:23 89:24 & uptodate (1) 20:20 & went (4) 46:12 77:7 88:14 & 12 (3) 10:23 26:24 80:17 & 2e (1) 61:6 & 9 \\
\hline total (2) 47:865:22 & upwards (1) 4:10 & 100:13 & 124 (1) 91:11 & & \\
\hline totally (2) \(52: 682: 15\) & used (19) 9:11 10:13 & werent (2) 41:6 72:13 & 13 (5) 10:16 22:21 65:17 & 3 & 9 (1) 12:7 \\
\hline towards (2) 25:25 54:15 & 15:7,8,17 16:7,22 17:5 & weve (7) 12:19 29:18 31:1,5 & 81:14 83:3 & & 90 (5) 83:2,5,10,12,13 \\
\hline tower (10) 42:15 53:16 63:6 & 39:1 52:4 54:10 84:9 & 59:9 73:14 97: & 132316 (2) 10:20 11:25 & 3 (8) 11:17 24:19 26:23 & 9001 (1) 77:1 \\
\hline 70:19 71:2 72:10 79:11 & 85:2,3,12 86:1 97:24 & whats (2) 50:10 107:5 & 132317 (2) 10:20 11:25 & 27:25 55:20 67:11 69:21 & 90degree (1) 81:6 \\
\hline 84:13,22 85:5 & 103:17 & whatsoever (2) 17:10,14 & 133 (1) 42:10 & 110:5 & 92 (3) 83:5 84:14,17 \\
\hline trained (1) 92:3 & useful (2) 50:4 51:20 & whole (14) 32:23 & 13501 (2) 31:22,25 & 3000 (1) \(65: 18\) & \\
\hline training (9) 91:15,19 92:2,11 & user (4) 49:25 50:3 51:16,19 & 50:15,22,22,25 59:3 & 135011 (1) 3:15 & 300dpi (1) 49:10 & \\
\hline 93:1,23 94:2,5,8 & users (2) 26:9 52:4 & 64:4,17 65:1 79:9 87:21,22 & 1350112002 (3) 57:15 86:24 & 315 (1) 89:2 & \\
\hline transcript (4) 71:5 104:20,22 & userspecifier (2) 49:14 51:9 & 95:24 100:25 & 88:10 & 320 (1) 89:10 & \\
\hline 105:18 & using (1) \(36: 24\) & window (1) 62:12 & 135012002 (2) 57:20 87:3 & 33 (2) 31:8,16 & \\
\hline transform (1) 82:11 & usual (2) 1:4 2:2 & wish (2) 7:7 68:24 & 14 (1) 53:4 & 335 (2) 89:7,12 & \\
\hline transformed (2) 15:19,21 & usually (3) 7:14 91:22 95:8 & witness (37) 1:23 & 15 (5) 22:6 33:2 36:17 48:16 &  & \\
\hline transformers (1) 82:11 & & 2:6,9,14, 20,23 5:16 12:13 & 95:21 & 35 (4) 4:3 64:22,24 67:6 & \\
\hline translate (13) 34:7 48:25 & v & 14:11 15:15 18:15,17,20 & 155 (1) 68:1 & 36 (3) 64:23,25 91 & \\
\hline 50:21,25 64:3 65:1 66:5 & & 30:16 32:12,16 37:24 & 157 (1) 69:17 & \(\square\) & \\
\hline 68:5 69:14 71:8,11 80:23 & valid (5) 3:18 4:22 5:1 & 50:22 59:3 60:10,13 62:25 & 16 (3) 36:8 63:1,24 & & \\
\hline 105:22 & & 63:24 65:2 68:6 70:18 71:1 & 160 (1) 31:7 & 4 (4) 4:5 10:6 11:18 24:10 & \\
\hline translated (3) 64:17 70:4 & 5:3 & 78:3 79:22 83:1 89:20 91:8 & 165 (1) 69:24 & 40 (2) 42:15,21 & \\
\hline 104:23 & validity (4) 27:9,16 & 95:20 99:2 100:22 109:4 & 16527 (1) 22:17 & 4000 (1) \(65: 19\) & \\
\hline translation (19) 15:9 41:10 & 87.2 & wont (1) 17:19 & 166 (3) 14:12, 13,14 & 42 (2) 4:11 33:11 & \\
\hline 51:2 52:20,24,25 & variant (14) 16:4 32:4 33:21 & work (5) 15:6 55:22 80:20 & 169 (1) 10:5 & 43 (1) 4:20 & \\
\hline 55:7,11,15 64:2,5 66:8 & 34:25 35:7,9,13 41:4,13 & 98:10 102:24 & 17 (3) 1:1 64:18 78:4 & 435 (1) 109:6 & \\
\hline 67:22 68:3 69:15 70:11 & 45:19 47:24 75:6,14,15 & worked (2) 39:4 40:8 & 171 (1) 11:6 & 45 (1) 33:11 & \\
\hline 77:14 80:25 104:24 & variants (1) 17:3 & working (6) 37:6 43:15 48:10 & 173 (1) 11:20 & 476 (2) 10:18,19 & \\
\hline translator (7) 48:25 55:9 & ious (5) 56:14 100 & 94:24 96:17 102:22 & 176 (1) 12:2 & 4766 (1) 31:2 & \\
\hline 64:3 68:5 71:7 80:24 & 103:10 106:14 & world (2) 43:11 94:25 & 177 (2) 32:18,19 & 47661989 (1) 58:16 & \\
\hline 105:22 & ventiated (1) 10:13 & wouldnt (6) 21:15 29:13 & 18 (1) 109:8 & 47671997 (1) 58:18 & \\
\hline treated (1) 108:2 & itilation (1) 62:9 & 40:20 59:8 88:24 107:7 & 18m (1) 43:23 & 48 (3) 32:17 95:23,24 & \\
\hline trouble (1) 18:23 & version (37) \(4: 10\) 9:20,21 & write (2) 65:10 67:14 & 19 (3) 3:18 4:8 36:9 & & \\
\hline true (4) 31:18 41:23 45:18 & 14.11,12 18.1 28.5,6 & writing (1) 27:8 & 1987 (3) 8:6,7,8 & 5 & \\
\hline 101:20 & 36:8,9 48:18 52:23 & written (6) 23:6 64:15 65:14 & 1990s (2) 8:11 38:25 & & \\
\hline truth (4) 46:23 47:10,13 76:7 & 54:6,16,17 55:15,25 56:20 & 71:15,16 72:25 & 1993 (1) 77:1 & 5 (4) 11:7 57:5 61:25 71:18 & \\
\hline try (8) 13:21 37:20,22 41:11 & 61:25 62:1 71:9 & wrong (4) 46:12 70:20 72:21 & 1997 (3) 8:7 31:6,17 & 50 (1) 6:10 & \\
\hline 42:1 86:7 88:3 92:24 & 74:11,16,20 75:3,3,22 76:8 & 77:7 & 1d (2) \(26: 16,19\) & 5000 (4) 4:3 57:13 86:22 & \\
\hline trying (1) 83:20 & 80:19 83:9 86:19,19 & & 11 (1) \(27: 12\) & 88:8 & \\
\hline turn (5) 6:18 30:22 48:8 & 88:12,17,19 97:10 98:1 & x & & 54 (5) 33:1 36:10,11 37:23 & \\
\hline 56:20 89:24 & versions (5) 3:20 4:5 & 65:18 & 2 & 38:4 & \\
\hline turned (1) 36:13 & 24:10,19 97:15 & (3) 49 & 2 (11) 3:20 14:25 24:3,4 & 55 (46) 6:20 8:2 10:9,23 & \\
\hline twice (3) 23:14 39:1 95:2 & via (2) \(1: 22\) 96:13 & Y & 26:13 27:10 49:11 & 6,12,23 15:16,25 16:4 & \\
\hline twothirds (1) 83:15 & vince (5) 8:2 96:22 97:9,9,16 & & 59:18,22 65:18 70:2 & 20:16,21 21:4 31:25 32:5 & \\
\hline type (5) 15:6 16:21 17:12 & visit (2) 93:8 98:7 & year (7) 9:4 39:1 67:17 70:6 & 20 (7) 5:7 6:9,14,15,17 63:1 & 35:1,7,13 41:4,13 43:3 & \\
\hline 82:15 99:13 & voice (1) 45:16 & :2 108:6,7 & 95:22 & 13,20 45:3,20 46:22 & \\
\hline typed (1) \(23: 5\) & volunteer (2) 38:21 40:1 & years (8) 3:19 27:15 40:6 & & 7:14 48:13 57:22 58:1 & \\
\hline typical (1) 57:1 & volunteering (1) 40:12 & 70:22 72:23 105:10 107:15 & 2000 65:18,18 (41:3,5 & 60:18 63:2,3 70:18 74:12 & \\
\hline & & yellow (1) 51:7 & 2004 (7) 12:7,11 13:16 14:3 & 84:12,21 85:25 86:12 87:7 & \\
\hline uk (16) 6:19 7:21,22,23 & wales (7) 42:22 55:5 61:3,19 & yesnow (1) 95:20 & 18:11 32:4 61:7 & 104:11,17 & \\
\hline 14:19 33:9 47:25 59:18 & 92:13 93:3 102:22 & yesterday (8) 2:17 6:9 9:10 & 2005 (3) 40:6 57:25 108:4 & 58 (2) 78:5,6 & \\
\hline 79:2,9 86:9 87:4 88:11,16 & wall (9) 23:4 53:20 54:4,9 & 10:22 13:8 16:3 71:6,12 & 20052006 (1) 9:10 & 59 (2) \(28: 6,7\) & \\
\hline 108:15,25 & 56:7 62:2 64:12 77:23 & youll (1) 12:8 & 2006 (19) 3:9,9,18 4:9 9:3,6 & 5a (4) 6:10 31:23 35:2 & \\
\hline unable (1) 76:6 & 78:10 & youre (13) 2:5 13:15,19 19:6 & 13:11,17 14:4,10,15,25 & 5b (34) 16:3 32:3,8,13 & \\
\hline underneath (5) 4:25 10:16 & walls (2) 10:14 54:11 & 30:18 39:10 60:8,11 70:21 & 16:25 22:13,22 31:8,16 & 34:13,17,21 35:12 & \\
\hline 53:23 54:21 65:20 & warning (2) 82:1,19 & 76:6 89:4,21 93:23 & :4 58:8 &  & \\
\hline understand (16) 9:15 14:1 & warrington (2) 10:20 11:25 & yourself (15) 18:23,23 26:2 & 2007 (28) 5:10 7:25 17:22 & 45:7,10,17 46:6,9 & \\
\hline 21:18 29:6 43:8,12 71:19 & warringtonfire (1) 58:22 & 27:1 28:12 32:22 38:3,5,10 & 18:6 20:2 22:14 24:13 & 238.4 49.25 50.4 & \\
\hline 82:10 86:2,16 87:15,23 & wasnt (9) 14:6,20 17:11 & 59:6 68:19 69:1 78:7 96:2 & 33:2,12 36:17 46:4 & 51:16,20 52:8 75:21 81:23 & \\
\hline 102:1 103:22 104:23 106:1 & 29:21 42:7 74:13 75:8,16 & 102:7 & 48:10,23 64:9 65:5 & 85:18 108:1,1,16 & \\
\hline understanding (4) \(7: 10\) & 97:24 & youve (3) 6:13 44:10 100:17 & 66:11,25 67:8,24 68:1,21 & 6 & \\
\hline 43:16 90:24 100:6 & watford (1) 14:18 & & 70:13 72:20 73:15 76:21 & & \\
\hline understood (1) 59:15 & way (8) 23:1 50:10 54:14 & 0 & 90:2,7 108:6 & 6 (7) 10:18 11:18 55:6 & \\
\hline undertake (1) \(28: 20\) & 73:10 82:10 83:15 86:7 & & 2008 (9) 53:4,10 69:23 & 57:6,7 59:4 60:21 & \\
\hline undetected (1) 69:6 & 105:16 & \[
44: 1,23 \text { 47:8,11,12,14,17 }
\] & 70:2,6,13 72:20 73:15 & 61 (21) 57:8,11 58:5 59:3 & \\
\hline unexposed (4) 56:15 61:8,11 & wed (1) 47:10 & 52:3,5 55:5 58:17 61:1,9 & 76:21 & 60:20,25 62:17 65:22 67:3 & \\
\hline 65:13 & wednesday (1) 1:1 & 103:19 104:3 & 2009 (1) 46:4 & 74:15,20 75:2,4,9 76:7 & \\
\hline unfabricated (1) 84:20 & week (3) 20:4,11 93:7 & 05 (1) 56:8 & 2010 (3) 80:2,6,11 & 86:3,14,17,20 88:4,6 & \\
\hline unfounded (1) 16:22 & weeks (1) 93:7 & 05mm (1) 11:13 & 2011 (1) 105:7 & 62 (8) 58:12 59:3 60:20,25 & \\
\hline unintelligible (1) \(37: 11\) & wehrle (46) 9:19 12:5,11 & & 2012 (3) 99:10,11,25 & 62:17 86:4,14 104:1 & \\
\hline united (6) 31:19 92:12,25 & 14:7 28:4 32:12 36:6 & 1 & 20132014 (1) 108:10 & 63 (3) 60:22 86:4 104:1 & \\
\hline 93:2 103:7 104:7 & 38:2,15 39:5 40:18 45:11 & & 2014 (1) 105:11 & 64 (1) 61:15 & \\
\hline unless (5) 35:14 41:3,12 & 46:1 48:22 49:3 62:19 & 1 (14) 10:8,19 22:6,7 & 2015 (1) 40:7 & 65 (8) 62:1 77:17,20,22 78:9 & \\
\hline 82:12 85:25 & 64:8,10 65:4 66:11,17,25 & 5:6,13,18,25 58:18 61:21 & 2016 (3) 99:10,11,25 & 79:15 86:2 87:20 & \\
\hline unsatisfactory (1) 26610 & 67:7 68:6,9 70:1,14,17,25 & 64:19 65:8,9 110:3 & 2017 (4) 53:15 104:21 & 66 (1) 62:6 & \\
\hline until (9) 20:6 63:6 70:19 & 71:14,23,24 72:3,15 & 10 (6) 10:19 12:3 91:10 & 105:20 108:6 & & \\
\hline 71:2 72:9 106:4,6 107:9 & 73:16,19,23 75:18 76:1,11 & 108:25 109:5,7 & 2018 (1) 97:11 & 7 & \\
\hline
\end{tabular}```

