

and better consistency of where they might be part of the evidence base and in the complex commercial buildings I think they could have a relevance but that could be part of the quality assurance mechanism and I think much clearer direction about when and where they might be useful.

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MR ALLAN:

10 Q. Is it proposed Mr Kelly or under consideration that a risk based approach will afford a building consent authority some latitude in determining what quality assurance path a particular design should follow and that producer statements might have a role in that regard?

15 A. Our thinking is still developing on that. The legal situation is that the consent authority has some latitude. The Ministry's view is that we need to play a stronger role in giving some guidance to local authorities. I think for some local authorities and having worked in local authorities it will be quite difficult to come up with a quality assurance framework that is robust and so we think we have a role in setting out some guidelines around what a quality assurance programme should include, what are
20 the elements that must be covered. That's not to preclude an applicant coming up with something better but it is to establish a baseline. And as part of that peer review is a relevant aspect. We believe that it should be a component of any quality assurance framework for quality, for complex buildings. That's just a must as far as we're concerned.
25 However we think as a matter of good practice that the peer review of the design and the assumptions that are made in relation to the design should happen early on in the process.

30 The technical advisory or the expert advisory panel that the department, then department had looking at the major building collapse, made a recommendation that a design features report should be used as a useful tool. We think that that's a very valid recommendation, need to work there exactly how that will be used but particularly setting out the design assumptions that could be tested early in the piece rather than a

peer review at the end of the design process we think is good practice. It's also critical that the peer reviewer is able to stand up for their findings so there is a question around the competence of the peer reviewer and how the peer reviewer is commissioned. In the fire instance previously part of the concern was that the designer was picking their own peer reviewer and so there wasn't necessarily some transparency around that.

And I think I noted yesterday and it was also mentioned I think by IPENZ, their practice note 14 which they issued I think around about 2009, it looks like a useful starting base document for some of this work and it could in fact be part of a regulated system if necessary.

Moving now to building warrant of fitnesses, warrants of fitness I should say. There is currently a warrant of fitness scheme for specified systems in multi-storey buildings and they are annually inspected by qualified people. Those systems are those that have potential impact on health and safety, particularly thinking about lifts, sprinklers, air conditioning, air conditioners and the like. The question that's been raised is to whether there should be a broader building structural warrant of fitness looking at the structural integrity of the building. At this stage while we haven't done a large amount of thinking, we're not convinced that that is the best way to go. Potentially it adds a lot of cost into the system. There'd have to be some detailed thinking about it. What point do you need in a building's life to have a structural warrant of fitness? For instance brand new buildings I wouldn't think for quite a number of years that that would be relevant. The question in our mind is whether it's better to think more rigorously around the dangerous building provisions and make that a more robust process and a more proactive process rather than come up with a separate regime and as we work through that and we are of course are awaiting the Royal Commission's report on earthquake prone buildings that will be part of that broader consideration and policy discussion, and ultimately we believe a societal discussion needs to be had about this whole area.

In terms of innovation, this is the final slide, or final two slides, there's a question of whether the current framework impedes innovation. In a technical sense it doesn't, the regulatory framework doesn't preclude innovation and the building code is a performance based regulation that in theory should enable innovation. In reality however there is a lot of feedback that the current consenting process and because of what's perceived as a risk averse culture within the BCAs because of their own liability, which has been evidenced through leaky homes, that it is difficult to get innovative solutions through the consenting regime. So I think we have to recognise that that's a reality for many people.

There are two parts to that, one is a question around the evidence base that applicants are providing and in some cases we would say that the evidence base is not sufficient, that they have developed some good thinking but haven't taken it through to a point where any consent authority could have confidence that it's got the right evidence base. On the other hand the question around the risk based consenting system is how do we allow for innovation but with some boundaries around it? How do we allow for safe innovation and Dr Mumford has written a whole thesis that's related to that, so that's a very live topic for discussion. So part of the work that we are following through is codification of those areas of alternative solutions that might be coming up more frequently, hence the need to have more hard data about what is going through the consensus from across the country and whether we can move them into acceptable solutions or variations thereof.

We have implemented the multi-proof concept, particularly around residential buildings but looking to extend that into other buildings that are built multiple times, and it allows in this case the Ministry to perform the role of the previously BCAs might have performed. One of the questions for us will be if we move to centres of excellence or expertise where that service should fit in the future. So there is the potential to extend whether it's multi-proof or using some of the work we've done about product certification in the product framework to allow for better dealing with these complex buildings.

And then just a final note, we've already discussed the national consenting and the centres of expertise, which we are keen to move forward on as part of a discussion with local Government. And that's the end of my presentation Commissioners.

5 Q. And I have no further questions.

QUESTIONS FROM COMMISSIONER FENWICK - NIL

COMMISSIONER CARTER:

10 Q. Yes, I've got a few, in regard to peer review, have you taken any advice on how to deal with issues of liability of peer review?

A. It's one of the things that we know is an issue in that we haven't taken any legal advice yet but as part of the planning around this we know that that's an issue, we've certainly had feedback and firms that are currently involved in peer review have that as an issue, I think there's quite a body of knowledge from those practitioners about how they deal with it and we've been looking to their expertise as to how, what's the best practice or what's good practice in dealing with that.

15 Q. And another matter, with respect to warrants of fitness, with the reviews of building for earthquake prone standard which will be, you know, ongoing, I think that will give some answers on the structural capability –

20 A. Yes, yes.

Q. – so you'd be looking at deterioration would you in terms of a building's life?

A. That's right, yes.

25 Q. Those were a couple of points I think were worthy of attention by the Ministry.

JUSTICE COOPER:

Q. This idea of centres of, you called them excellence or expertise?

30 A. Expertise.

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Q. What is your current thinking about what they might do?

A. The focus is particularly around the more complex commercial buildings and how they would, if we put that together with the idea of a quality assurance programme, those people who can look more closely at what that quality assurance programme looks like. Does it look as though it is a robust process? Who will have a better knowledge both of buildings, who can draw on experts from the sector where they need and also knowledge of the sector itself and its expertise and level of knowledge and can identify where the risks might be in particular building types. So it is really trying to lift the bar in that respect, it is not an expertise that currently sits or exists within local government. Potentially I think it also may offer a different career path for the best within the current system.

15 **COMMISSIONER CARTER:**

Q. Have you look at the urban planning model of how that is being operated on, matters of planning approval?

A. We have yes, yes we have.

Q. And that fulfils the early advisory stage that is helpful in that regard so people doing a lot of wasted work on something that is not later you know acknowledged to a degree –

A. I think it is a good analogy or a good parallel example of looking early, being clear about what the issues are and addressing them. I think there is a natural human resistance if you have done a lot of work and someone comes along at the end of the process, there is a natural human resistance to be defensive. So there is that, I think the other thing that we have talked at times briefly with IPENZ around is could this also be a mechanism for helping to up-skill younger engineers where they've got that input. There's a question and I don't know the answer to this about the processes that firms have for support and development of their staff but I am sure it varies and for smaller companies I would imagine it is more of a challenge than for some of the larger companies, I may be wrong there. So there is a question there I think to explore

how that can support some other better outcomes around better engineers.

JUSTICE COOPER:

5 Q. The centres of expertise, do they potentially have a consenting role?

A. Yes, it is around consenting but as I say it may not be consenting in the way we see it today. I think people struggle to see a different consenting regime for instance, in the residential area for simple houses it might be that we can get to a stage where there are companies who are very good at that work, have a very good track record, have good systems in place and essentially we are crediting to them the provider than each house every time. It is a different way of consenting than we currently have. The centres of expertise is a different way of consenting that we might currently think about but it is not lowering the bar. It is in my view making it a more robust process. I think at times the current process gives potentially false hope that the process has been really robust.

JUSTICE COOPER:

I am just having a bit of trouble fitting that into the idea that you might, that the consenting role might relate to complex structures. That is not going to be able to be done with – or are you talking about doing that as a matter of authorising a firm or I am not quite sure what, to issue –

COMMISSIONER CARTER:

25 Authorising a design technique would have different connotations than authorising the design itself so in effect in a consent authority sense if they had the equivalence of an urban design panel operating on structural design it may well concern itself more with the model by which the work is going to be designed, considering the level, degree of complexity that it has rather than it actually being the checker if you like of the calculations?

MR KELLY:

That's right, that's right, rather than what I had done earlier in my career was checking calculations. It is actually the process that Sir Ron Carter has talked about but ensuring that the people in the process and the peer review is at the early stage are qualified and have a degree of independence and so is being
5 really clear about what that process is.

COMMISSIONER CARTER:

That would have a way of managing the liability questions also?

10 **MR KELLY:**

Yes.

JUSTICE COOPER:

I want to understand how it fits into a regulatory system if may?

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MR KELLY:

Yep.

JUSTICE COOPER:

20 Would it involve reporting to the consent authority or would it involve giving the consent?

MR KELLY:

It would involve giving the consent. It would be a consenting authority. So
25 centres of expertise within a consenting authority so that rather than every council across New Zealand, given that we have a relatively small number of complex buildings it could be located within an existing council, for instance, Auckland Council might be a centre of expertise for highly complex buildings that then issue the consent either within Auckland or within other parts of New
30 Zealand.

JUSTICE COOPER:

And how many of these centres would there be?

MR KELLY:

I don't know. I think there is a bit of analysis to do.

5 **JUSTICE COOPER:**

It is hard to think there wouldn't be one in Christchurch isn't it?

MR KELLY:

Yes.

10

JUSTICE COOPER:

And that would be the Christchurch City Council?

MR KELLY:

Yes.

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JUSTICE COOPER:

Effectively or would it be something complete independent from the territorial authority? Too early to say?

20 **MR KELLY:**

If I think about it more broadly we have got a process to go through which isn't just about this issue but the whole consenting system and how that is delivered and so I go back to the earlier comments. There's the government decisions out of the 2009 review was to do some work to ensure better efficiency and consistency of decision making across New Zealand and that could include a number of options including consolidation of the number of consent authorities or joint service delivery et cetera, there is a number of tools that will need to come together and we need to do that work with local government because they are the current providers to explore what those models look like. There has been for instance mooted, having one national consent authority. Now the question then is even there, how do you deliver because you still need to deliver local services for the inspection side of it. So there is a number of potential options that we will need to think through and tie

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it up with that also is the use of technology for online application of consents and use of technology to track consents et cetera, so there's quite a big piece of work around the whole of that system, the centres of expertise are one, I think quite useful tool, that could be added to it.

5 HEARING ADJOURNS: 11.35 AM

HEARING RESUMES: 11.51 AM

MR MILLS:

We are now going to hear from Mr Nicholas Hill and Mr Peter Laurenson and
5 they're going to present together. That is my understanding, so if they could
just come forward?

NICHOLAS WALTER HILL (SWORN)

PETER JAMES HENRY LAURENSEN (SWORN)

10

MR MILLS:

Now I'll just individually with each of you sequentially just go through the
normal kind of details that we do in these matters, and Mr Hill I wonder if you
could first state your full name because I don't actually think I've got it in front
15 of me?

MR HILL:

Nicholas Walter Hill.

20 **MR MILLS:**

And you're the chief executive of the Building Officials Institute of
New Zealand ?

MR HILL:

25 I am.

MR MILLS:

And that body, as I understand it, represents building control officials around
the country?

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MR HILL:

It does.

MR MILLS:

And your, the Institute's, if I can put it this way, mission statement effectively is
5 dedicated to improving the professionalism and ongoing skill set of your
members?

MR HILL:

That's right.

10 **MR MILLS:**

Mr Laurenson could I ask you just to state your full name?

MR LAURENSON:

Yes, Peter James Henry Laurenson.

15

MR MILLS:

And you're the building control manager for Lakes Environmental Limited?

MR LAURENSON:

20 Yes.

MR MILLS:

And that's a Council controlled organisation of the Queenstown Lakes District
Council?

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MR LAURENSON:

That's correct.

MR MILLS:

30 You've been in that role for nine years?

MR LAURENSON:

Yes.

MR MILLS:

Prior to that you had 22 years working in the building supplies industry with Carters?

5

MR LAURENSEN:

Yes.

MR MILLS:

10 Now I think you've got a new set of PowerPoints that we've just had and so I'll just let you move through those and make whatever points you wish to make?

MR HILL:

15 Well first of all we'd like to thank the Commission for the opportunity to address you. The slides that you see are representative of our overall position and what we plan to do is take you through the seven questions that you have given us with an indication of how BCAs are progressing in terms of improvement.

20 So look, this presentation outlines our Institute's position as a support group for our profession. In essence our positions and perspectives are based around operational practicalities, professional expectations and the need to ensure accountability. The Institute is a not for profit and has a charitable organisation status and represents approximately 1200 building officials and the principal roles being consenting and inspection.

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JUSTICE COOPER:

The territorial authorities give you funding at all?

MR HILL:

30 No.

JUSTICE COOPER:

Do they not?

MR HILL:

Some of the territorial authorities support their employees' membership fees
5 but no direct funding.

MR LAURENSEN:

What, and additionally through some training delivery obviously.

10 **MR HILL:**

So we operate for the good of our members, industry stakeholders and the
public's ability to live and work in buildings safely.

JUSTICE COOPER:

15 Sorry to interrupt but just to ask, do you, how many building control officials
are there in the sector? What proportion of those are members of your group?

MR HILL:

That's a good question. It's a question we continually ask ourselves. I think
20 the answer is that for not for profits and professional organisations that don't
have a mandatory requirement to join the organisation, it's between 60 to
75%. So we would arguably say there's probably between 1500 and 1600
individuals working in the building control area.

Right, so accordingly we liaise very closely with the regulator, Standards
25 New Zealand, BRANZ, Local Government, other industry (inaudible 11:57:03)
associations, the wider built community and we take on board public
commentary. The Institute as you will have heard is dedicated to
professionalism within the building control sector. On that basis the Institute
has established a training academy to develop and deliver technical
30 programmes, and two of those areas that we deliver to are to support the
diplomas and building control survey, and of course continuous professional
development. Not only do we deliver that training directly to our members, we

deliver to non-members and we tailor training to other sectors of the built environment, construction sector.

5 **JUSTICE COOPER:**

Is the training academy based somewhere physically or is it?

MR HILL:

10 Yes, we're based in Wellington and the training academy is one of our departments. Having said that, we're a very small organisation with four full-time employees.

JUSTICE COOPER:

Right, but do you rent premises?

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MR HILL:

Yes we do, yes.

MR LAURENSEN:

20 So in terms of delivery of that training that also happens around the country. (inaudible 11:58:11)

JUSTICE COOPER:

25 Yes I imagine it would but you've got a base and you're obviously, I mean there's some costs associated with what you do obviously?

MR HILL:

Quite significant costs, and it requires some commercial imperatives to support the operations that we run.

30 So we support the BCA sector, that's one of our mandates and the Board's wishes, and where we can we take a level of professionalism and collectivity to the sector, rather than allowing, shouldn't say allowing, but seeing I

suppose a lot of component parts do different things, we try and co-ordinate the best outcomes for the sector.

So now we're going to talk directly to the questions and the first question that we've been asked to address is, is there sector capability to ensure
5 compliance documents, standards, guidance documents are of a high and timely quality? And I thought it would be appropriate to comment in respect of this question on four issues and they'll be around a document hierarchy, document quality and timeliness, document interpretation and accessibility.

In terms of document hierarchy, the Institute supports the core regulatory
10 document framework, a performance-based building code supported by a community and industry developed standards.

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We see, as you would've heard earlier an advantage in having a national policy statement and we feel that this would enhance the hierarchy and the
15 production of documents moving forward. We would also see that a national policy statement should encompass the main participants in their roles and clearly articulate a vision over a prescribed timeframe and you heard quite a bit about that earlier today so I won't go into it. The joint – and several liability system creates a risk averted approach to the compliance document system
20 with various stakeholders trying to avoid their documentation being mandatory for risk of complete liability and attributing back to them as opposed to a different system of shared responsibility.

In terms of the next point that in relation to this question, I just want to comment on document quality and timeliness, an overview. I mean I think
25 these two issues generally are linked to funding ability, and we've heard quite a bit about that already but I – in terms of putting the institute's position I will just cover a bit of ground that has already been covered. There are issues around the updating or amending the delivery and the access to standards and they are – and they are primarily we believe funding based. There is a
30 need for a clearer and more certain funding model in the standards that New Zealand's current self-funding requirement, and while the catalogue of building standards is around 80 percent linked to Australian standards many are unique to a New Zealand environment and they are of public good and

that was also covered earlier on today. We'd also add that while the regulator can quickly produce guidance documents there is a question mark over the ability of New Zealand standards to respond similarly. The result being a blurring of responsibilities in our view, particularly where one may expect a
5 citing of a standard in a guidance document but is omitted due to appending update or an amendment. So on that basis the Institute strongly recommends the use of the building levy to transparently support timely development and access of critical building standards and we'd also strongly support that the appropriate standard setting body is or continues to be Standards New
10 Zealand, not necessarily the regulator. The Institute was also heartened to hear the views of the Ministry yesterday and today, in respect of the presentations that came through from Mr Dave Kelly and Dr Peter Mumford and we think that that's progress in – quite substantial progress.

The third point in relation to the first question is around about document
15 interpretation. So we've made the point that the building code hasn't substantially changed since 1991 but the standards and acceptable solutions have, so for building control officers the core document and driver of the work is the building code, and as a result I continually hear there's a level of frustration by the limited understanding and the ability of the sector to interpret
20 the code, most notably the design at the design level, although we're starting to see behavioural and cultural changes come through and David Kelly I think alluded to that yesterday. Also builders tend to focus on a limited range of standards in terms of their professional knowledge requirements at the expense of the code standards and we think that there's an opportunity for the
25 Ministry to emphasise a greater level of accountability in respect to understanding the need to demonstrate compliance with the performance requirements of the building code.

MR LAURENSEN:

30 That's just to – another comment at that end I guess a lot of the discussion in the last couple of days has been around the access to standards at the front end of design and those couple of bullet points are talking about I guess what our members experienced on site in terms of a set of documents that show

how a building should be built and then some natural changes that happened throughout the design process. So we're referring in there to the fact that the understanding of the importance of bringing that back to accurate documents record what's happening and who the role – who should have that role in terms of a combination between the designers, the building practitioners, the owners and our role as building officials. So we're just probably talking about it at the real built end at that point.

MR HILL:

10 So we'd also make the point that there is an opportunity to signal that there is a limited amount of knowledge in terms of the code and standards and acceptable solutions in certain parts of the building sector and that using the BCA environment as a backstop for compliance knowledge is not productive, and it's no longer acceptable and we'll probably talk about that later on.

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JUSTICE COOPER:

Can I just ask Mr Laurensen under the current regime is – there's now a requirement to produce as-built plans is there, or is there not?

20 **MR LAURENSEN:**

Yes and there is definitely is, in terms of certain parts that tend to get changed more commonly throughout a building. I guess that comes from the change in the 2004 Act with a test is that the building work is done in accordance with the plans, whereas the original test done for the 91 Act was in accordance with the Code and there's still – the code compliance is still very important in the way it should but it's getting them.

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JUSTICE COOPER:

30 So it's – is it expressly stated in the Building Act that if you're going to change the plans as the development proceeds, you have to produce such plans or is it that if you don't, you risk not getting a completion certificate?

MR LAURENSEN:

It's not expressly stated that you must submit different plans but it's certainly the test for a building certifier's responsibility that that's where the – in fact in the 2012 amendment the reference to a code compliance certificate changes over to be consent completion and I think your point is right that that actually
5 is an important part that the completed set of documents and certification should reflect what is actually built.

JUSTICE COOPER:

So I don't want to sort of deflect the discussion into a side street but since
10 you've raised it, what do you – put you in a difficult position doesn't it? I mean you have to go out and check the – check that the building, do you do that, do you audit or how do you go about it?

MR LAURENSEN:

15 Yes certainly there's a – I think there's the process of inspection of buildings is not a mandatory requirement in the Act but it does – I guess historically relate to requests for that inspection, and it certainly is one of the methods that we used to be satisfied of the physical building work but it certainly is limited I guess by the funding ability to do that in terms of what our role should be.

20

JUSTICE COOPER:

But am I right, the project's been finished, and the developer comes to you with a request for a completion certificate and that's a certificate that the building has been built in accordance with the building consent, is that right?

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MR LAURENSEN:

That's correct, yes.

JUSTICE COOPER:

30 So for that certificate to be accurate if what had been consented to had been changed, would have to, or there should have been amended plans produced which will then form part of the record of the consent as amended to which that building or to which the certificate relates.

MR LAURENSEN:

Yes there's certainly a hierarchy of change in the terms of something being a major or a minor variation. A number of minor variations are approved on the fly as you go through, and abide by a building control staff. In terms of a major variation there's a requirement to actually amend the consent to obtain that, but prior to doing the work effectively so it depends on the scale of the change as to what would be required but the intent certainly of the 2004 Act is at the end of the process the documentation is a complete record of the –

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JUSTICE COOPER:

You'll have a set of plans which shows what was built?

MR LAURENSEN:

15 Plans and specifications and other certification documentation, yes.

MR HILL:

And I suppose in relation to that point, I mean and the next point I'm going to make is that the Institute is ideally placed to educating the sector in that area in those requirements and we would look to do that.

The final point in relation to this question is an issue of accessibility and to a large degree a lot of this has been covered in previous sessions but designers and builders regularly advise us that they don't have complete sets of compliance documents, claiming cost as an issue but we'd make the point that you know that the BCA environment also shares the cost and pays way for its access as well.

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BCAs because of this have traditionally been seen as the backstop to getting it right in terms of the Building Code and regulatory requirements and if you take this to a logical conclusion the result is probably unnecessary costs that accrue to ratepayers and to the clients and designers and builders whose knowledge is deficient. So there are clear productivity gains to be achieved over and above the quality of outputs. So a clearly defined code and

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regulatory system that is accessible is the key to participants performing satisfactorily. The Institute is strongly supportive, and once again the building levy to fund timely standards develop and access.

5 So we'll just move on to question 2. We've asked whether there is capacity within BCAs to ensure adequate sign-off of complex buildings and I guess our overall answer is yes but we can qualify that in a number of ways. First we need to look at what sign-off is and generally that's determined by building complexity. It's about being reasonably satisfied. It's also about bringing together documentation and evidence around what other professions have done as part of their role in the building development but, having said that, 10 councils around the country have differing protocols and differing requirements, for example, CPEng certificates and peer review requirements and so forth.

Secondly, the question could be asked are BCOs experts? Yes they are in 15 certain areas and no they are not necessarily in all areas. So essentially their role is to ensure documentation and evidence is appropriately relevant and complete. They tie up all the aspects of the building construction together to ensure the building operates as a whole.

20 **UNKNOWN SPEAKER:**

Well perhaps if I just add to that. Certainly in reference to the last couple of days that you've been hearing from people is that the BCO is not aiming to be an expert in all fields and what we do come across on a daily basis is what we would term (inaudible 12:12:22) of compliance. So you may get a design or a 25 building that's compliant in one aspect of the Building Code or profession and the same in another area and the building officer's role is really to look across that and try and see that it works. Is it complete. So we certainly in terms of the work towards risk-based consenting we see that as being a good move within reason still containing that overarching third party oversight.

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UNKNOWN SPEAKER:

And probably the next point I'd make is that BCA accreditation since the 2004 Building Act has considerably moved the sector on from its previous styles

and methods of operation so that actually, in our view, is a plus and I think that we would argue that there's still more work to be done. In evidence of that we're starting to see a sharing of skills resource. BCAs by their location could be classified as rural or provincial or metro and as such there are requirements to sign off complex buildings that differ, so there's been a recent development amongst BCAs of working in geographic clusters, creating efficiencies of scale and sharing scarce resource and that can only be a good thing. Should a BCA not have, for example, an internal skill or a competency level to sign off a complex building, the natural course of events is for the building manager to seek assistance from a near-by BCA to assist the processing of the consent and undertaking inspections on a local basis.

JUSTICE COOPER:

Do you have to worry about insurance when that occurs?

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MR LAURENSEN:

I can perhaps talk on that in terms of wearing my BCA hat. There's a very strong cluster we work with in the lower South Island which is 11 councils from Timaru south and as recently as the end of last year we've got a resource sharing agreement signed by all those councils and there's elements of work being done within the councils. We've developed a memorandum of understanding and set of protocols that brings in I think referring to Mr Kelly's talk earlier on this morning about centre of excellence. We were talking more about a collaboration of excellence or expertise, sorry, rather than excellence. So we do that work on the basis it's the requesting authority or BCA that does hold that liability and insurance aspect of issuing the consent but we're using our neighbours and people with other expertise to do that level of complex work or it maybe even because of a limited resource available in terms of time to do it so it sits with the BCA, the liability sits with the BCA that issues the consent.

30

QUESTIONS FROM JUSTICE COOPER:

Q. So you're sort of trusting each other to an extent?

A. Absolutely, yes.

Q. And are there, within that overall group of 11 did you say?

A. Yes.

5 Q. Some councils are accepted as being experts on some sorts of things and others on others. Is that the way it works?

A. Absolutely, yes.

Q. How long has this system been operating?

10 A. I guess it's since 2006 we've had that sort of grouping together primarily around the requirement for accreditation and echo the comments that are on their accreditation regime has been very good for councils to share the knowledge between. You could probably say it was more insular before in terms of sharing expertise so that's where that started and as we've moved through phase 2 and phase 3 of accreditation, a lot of the activities are more to I guess to say more customer based. We've
15 achieved the same consent applications across that base as has happened in some other clusters around the country to try and make that process easier so it's a developing thing. The resource sharing has really only been in place since the end of last year.

20 Q. Right, the accreditation process which nobody's really spoken to us about -

A. Coming next I think.

Q. That was the genesis or the driver of this?

25 A. Certainly the catalyst and a good experience through the majority of it. Certainly our feeling would be there are some points that we need to I guess, hone down on now, is perhaps as much needed as they were at the start of the process so we're looking forward into how we can have some standardisation even within the current system.

Q. And are you getting compliments from customers over this?

A. Absolutely.

30 Q. Or is that too much to expect?

A. Probably just to, I can give once instance of what's happened in terms of documentation over the last, say, two or three years from our own experience in the Queenstown / Lakes District Council we've moved

from having 15-20% of applications having questions asked after they're submitted to current day we have 60% that don't have to have a further information request and that's through provision of some of the shared information out to customers to make better applications and that's reduced time-frames down over the last two years. We're about eight or nine days average processing days for reasonably complex buildings there so the processes that have come through from accreditation have been of great benefit to BCAs.

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Q. So the fact that the sort of standardised approach has been taken, I don't want to use that word pejoratively but that in itself has educated your customer, is that what's happened?

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A. Yes, I think with relevance to the work the Ministry does across the country is that is a fundamental plank that we see working with the Ministry is the centre of policy and the documents to then get that across into the building officials' network you're working with the customers in terms of design and construction it's been a lot of our focus over the last period of years.

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Q. And the benefit is you're getting better applications or applications which are more fit for your purposes?

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A. More fit for the building owners' purposes, yes in terms of less time and cost and more certainty. In fact again some of the comments Mr Kelly and Mr Mumford made earlier on in terms of, we've got a couple of slides that talk about the methods of that coming up probably.

Q. Thank you very much.

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MR HILL:

And there are a couple of examples with regards to that level of co-operation on the screen there through the Christchurch City Council, the Waikato cluster and of course the southern cluster that Pete just talked about and then you've got shared service agreements in some of the smaller councils.

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JUSTICE COOPER:

Q. Here's another interruption I'm sorry. You're saying Christchurch and Auckland Councils are co-operating?

A. Yes and because of the level of work that's currently going on in Christchurch there's a need to share some of the consenting work and that happens with Auckland Council, as there was a private contractor involved which is accredited, and I think somewhere they've also got an operation in the Hawke's Bay or the Bay of Plenty where they share work as well. I'm not too certain on that. So that level of co-operation is happening naturally now. The level of competence is increasing. The level of understanding is increasing and I think the net result is because of the co-operation that we have with the Ministry, we have a very close relationship with the Ministry and we have a very strong professional ethic which is driven by training to try and standardise the knowledge base of our people across the country. There's always a but, and –

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JUSTICE COOPER:

That's what we're finding too.

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MR HILL:

So look we may as well be honest here. I mean there is always area for improvement and we see that the ongoing area for us is qualifications and ongoing training. In terms of my view and the Institute education's needs to start getting the impetus that the regulatory development has had and possibly it needs a little bit more support from the regulatory environment. But there's been some good things happening, so let's not ignore that. I'm going to talk about two areas. The National Competency Assessment System and regulation 18.

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Both these initiatives which were driven by the regulator have advanced BCAs and their operational ability and BCOs in their skill sets significantly. So the National Competency Assessment System defines the competency for each of six building levies, setting explicit performance indicators and guidance for

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assessors, and the assessor being the IANZ. A skills matrix record results and allows individuals to operate to that particular level of their expertise and skill. So for example you may get in a rural environment a BCA and may only need to operate to the first three or four levels because of complexity of buildings in that area doesn't require going to the next two levels. We do have a slide coming on shortly to explain that.

In terms of regulation 18, regulation 18 is one of a suite of 19 regulations within the building, Accreditation of Building Consents Authorities Regulation 2006. I think from memory there are four which relate to training competencies and the processes and so forth. But regulation 18 is about the qualification and the requirements around it have BCOs to have an appropriate New Zealand qualification before December the 1st 2013 or be working towards and appropriate New Zealand qualification in a reasonable amount of time for December the 1st 2013, or BCA is to have an appropriate foreign qualification for the same time period. And there were eight qualifications recognised. Six were degree levels, and two diploma level qualifications and this recognition was relatively recent, within the last two to three weeks by the Ministry. Greatly appreciated because there was an element of, for want of a better word, apathy in adopting the qualification process by various partners within the sector. So the institute has driven this over the last two years. I've taken it on as my hobby horse and the Institute's invested a considerable amount of money in the development of the course material for the diploma qualifications, which are vocationally based and are designed around the work requirements within the BCO, sorry the BCA environment for BCOs that have been consenting for inspection.

I think the gains in relation to the qualification of BCO, or the qualifying of BCOs are going to be seen as a generational improvement in terms of professionalism and it's only going to add value downstream. So this is the, this is sort of the pathway that I think that the Commissioners may find interesting. It's probably worth noting that within the BCA environment at the moment, BCOs have, generally have qualifications of a trade level, but don't necessarily, and there has been no definitive vocational qualification around the work that they do within the BCA environment. So I'll try and take, walk

you through this. I've already talked about the competency matrix which is a requirement of the National Competency Assessment Programme. Individuals are assessed and they're put on the BCAs competency matrix and they will work through a structured training plan, whether it be residential 1, 2
5 or 3 and get qualifications in each of those areas. Not qualifications, I mean training and relative skill sets in each of those areas, and similarly in the commercial environment. So one could consider this is training, the training environment for a qualification. The diploma itself which is the theoretical improv – there is a level of theoretical and proactive experience that's required
10 for the diploma to be granted and there are two approaches that one can take given the large number of BCOs that don't have experience in this area, and the need to have, to be working towards or have a qualification. The process that we've worked with Otago Polytechnic is the approved prior learning process and that will allow BCOs to go through a process of evidence
15 collecting to prove that they are competent, and also undertake the necessary theoretical training or placement in practical environment to fill gaps so that they can achieve their diploma. So that's the point of qualification, the top of what I call the teepee, and then from there on in there is an expectation to maintain training through continuous professional development. My own
20 personal view is that CPD in this area should be considered mandatory and the requirements of the training should be looked at by an industry body on an annual basis, filling gaps where we know that there are weaknesses and so forth.

25 **JUSTICE COOPER:**

By an "industry body" you mean?

MR HILL:

Well I would, not only oursel – well, a collective group of industry bodies I
30 would say, it'd be engineers, a regulator, ourselves and others that will identify where issues are and the training will be put in place for it.

MR LAURENSEN:

I think Your Honour to refer back to some of the earlier conversations that have been had around perhaps standards and the development of those and the talk about the national policy statement is, I think that fits in very well because it's sort of a bit of the 80/20 rule in that 20% of the changes are the really important key ones that need to be in accordance with, need to be mandatory, and there isn't that requirement now. What we've introduced in terms of working on the qualifications sets a base of that with today's current thinking and understanding, but moving forward I think with the regulator and various other bodies agreeing these are the things that are important and referred to some societal queries earlier on in terms of is risk just about danger to people or is it also to do with the value invested in buildings and people's lives et cetera. So having a portion of that mandated to be throughout the industry we see as being a useful one from an Institute perspective as a good vehicle to put that across to a wide group of people.

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MR HILL:

So this next slide I'll just briefly cover some of the benefits of the qualification as we see it. This was a joint notice put out by the Ministry and the Institute and effectively the benefits that we see for a qualification and promoting it and getting people on board are basically a minimum benchmark of standards of vocational knowledge. It also allows for increasing the pool of qualified building officials.

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There is naturally a bulkhead in terms of people entering the industry on the basis that they, many would say that I don't want to be a builder or a plumber of the rest of my life, I want to continue, on so this is an alternative pathway. Obviously the qualification increases technical competence at consistency and professionalism on a national basis and it gives a level of credibility to building officials where other sectors have traditionally had their own qualification. So in my view long overdue. It also I think will allow a replacement programme for national attrition out of the sector, we are an aging sector, not unlike a lot of the industry sectors in New Zealand. So we need to encourage people into the sector. Young people obviously gravitate to

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qualifications, more so probably than predecessors and we see that the qualification will definitely enhance public confidence in terms of they can be sure that the people that they are dealing with in the BCR environment know what they are talking about.

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MR LAURENSEN:

Perhaps to say the somewhat preconceived conception that you had to have a bad back and come off the building site to be a building official has changed slightly to a qualifications based one.

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MR HILL:

Okay, so that basically concludes our commentary on the previous question.

Your next question was around, should there be a national consenting authority? We will sort of answer it in about, there is four steps. I think firstly I would make the point that we around four, four and a half million people and we have 68 BCAs, varied processes and requirements and they present differing customer experiences, look there is an opportunity for economic efficiency and efficiency in the quality as well. I think I heard David Kelly talk about centralised and regionalised consenting as an option on the table and that has been discussed with industry over about the last 18 months it has been a reasonably open discussion so there is no decision made yet but the institute supports a nationally consistent approach to consenting with appropriate national protocols and systems that we also believe that there's a real requirement for delivery on a local and regionalised basis and I just refer you back to the opportunities that clusters have produced on a voluntary basis in recent times.

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The key I think is getting consistency in process such as vetting, regulatory forms, and many of these issues have already been advanced on a regional basis. So you can see a customer would benefit by preparing an application with full knowledge of details required to demonstrate compliance of the building code. In many cases you would not have to think about doing it differently from one BCA to another and look we would support a centralised

repository for consenting documents to assist standardisation. We have no problem with that and we are aware that the Ministry is working on a national online consenting system and we are looking forward to more details coming out in that in the near future but effectively that centralised system is an internet based hub to retrieve and capture and add to the consistency of the process of building consents. Our view is, and I think the Ministry is working along the lines that consents would initially go into this hub, they would be vetted and then go out to the regional BCAs. So there is I think an argument that there is agreement in terms of regionalisation as opposed to centralisation on that basis. I won't speak on behalf of the Ministry though.

JUSTICE COOPER:

So the regional process in which – I mean it is not, there's no suggestion that this would be done by regional councils is there. It would be groups either voluntary or by law cooperating together for the purpose?

MR HILL:

Yes, I mean –

JUSTICE COOPER:

Groups of territorial authorities?

MR HILL:

There are natural geographical alignments that I think would come into play, for example the southern cluster already works in an environment and would probably be the ideal one for down South.

MR LAURENSEN:

And to add to that it doesn't just have to be a regional as well it certainly consistent types of consents and you know we already do work with people between the islands as an extreme sort of thing, so it doesn't have to be just regionally in terms of geographic nature.

JUSTICE COOPER:

And I suppose if consents were – if there was the central registry of applications for building consents that would, could be some filter applied at
5 that purpose so that if somebody wanted to put up something like the Sky Tower in Alexandra it could be – might not be –

MR HILL:

Yes you'd look to share the resource or get shared resource to make that
10 happen.

JUSTICE COOPER:

Yes, with things that look particularly tricky could be weeded out and given
15 some special process.

MR HILL:

And I mean Peter and I were talking recently with regard to some activity in the Clutha area where there may be a need to bring some special resource in
20 and that, so those considerations are already happening.

MR LAURENSEN:

Well in actual fact that one is the, in terms of the prison, it was built in Milton recently which was – fell within the Clutha districts boundary and they did a lot
25 of the onsite work but Paul did a lot of expertise from more than one other BCA, actually to – and with standards in place through the various Ministries and how that sort of work should be done so the local delivery of it physically happened seamlessly as far as we would see.

30 JUSTICE COOPER:

This is just a question that is probably out of place but what – there are processing timeframes in the Building Act?

MR LAURENSEN:

Yes, 20 day timeframe is the outside, yes.

JUSTICE COOPER:

5 And the extent to which that is achieved is reviewed statistically from time to time I suppose?

MR LAURENSEN:

10 Ongoing every day in terms of – that's a good benefit of the accreditation process so the Council were at, over the last two years I think 99.3% within that timeframe –

JUSTICE COOPER:

What was that percentage sorry?

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MR LAURENSEN:

99.3.

JUSTICE COOPER:

20 That was your Council?

MR LAURENSEN:

Yes and that is a high measure across the country in terms of getting through accreditation requirements.

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JUSTICE COOPER:

Is measured from when the information is complete I take it?

MR LAURENSEN:

30 Yes, correct, it is not a start again process so in terms of, from when it is lodged and I guess that is the point in terms of some of the systems that are coming in terms of online consistency and what we are achieving is if it gets to a better point hitting the table if you like then there may be a period of days.

In fact another figure that I could give you over, again a comparison between three years ago our total lapse time average across, just for our district, sat at about 40 days so that's taking into time the period that the applicant responds to. We are currently of the last year sitting at 18 days, so about nine days of
5 processing and about nine days of further information requests so –

JUSTICE COOPER:

Are these working days or just ordinary?

10 **MR LAURENSEN:**

Yes, working days and that has been experienced just -

JUSTICE COOPER:

How much of that is a reflection of low activity?

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MR LAURENSEN:

Well in our district they are 5% ahead of the previous year in terms of the volume of work. I think it is probably fair to say that some of the other regulatory approvals tend to get bundled into the same bracket as the building
20 consent process so in terms of the resource consent process which can take a period of time, it tends to be a mixing or a grey of water where the actual timeframe sits but certainly our position from the institute and from the BCA perspective is that the clarity around the requirements for documentation has been a very good thing in terms of passing through to the constructors of
25 buildings and that like I said before, it is not perfect in all places but it's gone a long way and so a consistency across the country is in building owner's advantage as well as building control officials.

JUSTICE COOPER:

30 Okay thank you.

MR HILL:

So the next point we'd make is – have a discussion with regards to regionalising and local delivery. I mean there is no doubt the building officials are essential in the conversations I have had with senior department officials there is a general agreement so I think the building officials will be around for
5 some considerable time. They are the professionals at the heart of the building sector and their knowledge and expertise helps to ensure a quality based and consistent building outcome.

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There is a real need for local knowledge and I've mentioned that before to
10 guide communities through the building process, it's not something that's easily understood or undertaken by the lay person, and the building – and the BCA sector is already working together in clusters so that environment already exists so that sharing of expertise process and resource I believe is probably a natural process to achieving regionalised outcome.

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JUSTICE COOPER:

Local knowledge you say is needed to guide communities through the building process, but there's more to it than that isn't there because I mean local knowledge is important in terms of identifying potential things that are
20 problematic isn't it?

MR LAURENSEN AND MR HILL:

Yes, absolutely – that is true.

25 **JUSTICE COOPER:**

So the system was being run completely from Wellington, they may not be looking for the right things.

MR LAURENSEN:

30 We don't want to knock Wellington but I agree, no I do agree with you.

MR HILL:

I think the point with that Sir is that certainly the make of that knowledge about local factors, and certainly in relation to the experiences in Christchurch, we're very fortunate in other parts of the country to have experienced and been on hand to see those sort of developments, so making that more transparent, right back at the design stage of the building before it even hits our desk is sort of the challenge to get that understood so it can be done on a more consistent basis.

MR LAURENSEN:

10 And one of the key areas I think that is going to help us moving forward is the uptake of technology. There's obviously going to play an increasingly important role in delivering this consistency to the consenting process. We're already starting to see it adding value at the inspection process where inspectors are going out with tablets, taking photos, dropping those photos onto electronic plans and so forth, so technology is already adding a huge value to the way we work and how we achieve accountability within the two main areas.

JUSTICE COOPER:

20 Has this been accepted at the political level, I mean that costs money that sort of thing.

MR LAURENSEN:

It does, but it also brings operational efficiencies at –

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JUSTICE COOPER:

Which can be demonstrated.

MR LAURENSEN:

30 Absolutely and the Minister was – is very supportive of technological improvement in the sector – discussions that we've had.

JUSTICE COOPER:

Yes well we, in our work have seen a real need for that to be widely available most, perhaps most notably in the area of keeping records.

MR LAURENSEN:

5 Yes absolutely.

JUSTICE COOPER:

And having them available when you need them.

10 **MR HILL:**

Yes, and in a pad means that you can have all of that at your fingertips rather than in a boot full of documents. And the efficiencies I think are huge, and we're going to see advantages over the next five to 10, 15 years, technology. So essentially that technology will add to a national data collection capability and it will allow quicker facilitation and a more efficient sector against approval – I've covered that anyway so. I think that one of the key things that is often not appreciated in terms of advancing technology within sectors is that you actually need high levels of training, it's not a matter of just letting people adopt the technology at their own rate, you actually need to be quite proactive so the two need to go hand in hand to get the real efficiencies out of it.

20 Right, question four, with regards to producer statements, their use and role in the regulatory framework. Pretty well a lot of this has been covered and I'm sure it's – but I'll just go through this very quickly. I mean you'll be aware that they don't have legal standing within the current Building Act, and however
25 councils continue to use producer statements for complex and commercial building work as a test for reasonable grounds of compliance and to minimise risk in areas of design, peer review, physicality such as structure and supervision. There are some councils that create a producer statement register to ensure individuals and companies are appropriately qualified or
30 have qualified people, that they are insured and in relevant cases professionally affiliated.

JUSTICE COOPER:

So you have to in, where the supplies prove to the Council's satisfaction that they're insured, get on the list?

MR HILL:

5 There isn't a mandatory requirement for that Sir but –

JUSTICE COOPER:

No, but is that the position the Council adopts or not?

10 **MR HILL:**

In some cases they do in relation to the risk of the work or the – yes so that's certainly the ones that are mentioned here in terms of the engineers' producer statements, their form actually covers a sign off of the level of cover so ...

15 **JUSTICE COOPER:**

And how is this – of this voluntary arrangement put in place, I mean what do you get a quicker way through the regulatory process if you can produce a producer statement. Is that part of the deal?

20 **MR HILL:**

Well I think there are two things. I mean firstly by lodging your credentials for want of a better word, you're already in a recognised position when it comes to each project of work and that in itself I think speeds things along, I know in terms of insurance having to produce the documentation in evidence around
25 that can be sometimes quite onerous so if you've lodged it once and you're doing work under \$100,000 for example I think the Auckland Council requires a \$200,000 insurance indemnity, so roughly double. Once evidence of that is achieved and you're working in that environment then there are reasonable grounds to assume that there is compliance.

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JUSTICE COOPER:

I suppose the Council has to strike a balance between having assurance and frightening people away?

MR HILL:

Yes.

5 **MR LAURENSEN:**

Overall you'd certainly see that there's room for, and I think there'll be a lot more industry discussion around the risk base consenting sort of approach and it would be definitely room for mandating this requirement for certain types of work and if that's known up front it's part of the design process, it's a part of what the building owner and the designers will tell the Council about what the process for the building is going to be and what that quality assurance process outcome will be so we would see that an element of this would be good to be mandated so that there isn't a –

15 **JUSTICE COOPER:**

So statutory provision for –

MR LAURENSEN:

Correct, yes.

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JUSTICE COOPER:

Back to 1991 in part?

MR LAURENSEN:

25 Correct Sir.

MR HILL:

I'll just move onto the next slide because I think there's been a bit of discussion on the subject already, but I mean in terms of the Institute's position I mean we see opportunity for a national system, and so we get consistency across the country. There's also an opportunity I think for producer statements to be more comprehensive, and possibly task specific – and I notice that Dave Kelly made a comment with regards to tilers. We

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wouldn't think that tilers need to be within that framework but we definitely would think that waterproofing of wet areas to stop structural degradation would be – and also plumbing and fire and so forth.

5 **JUSTICE COOPER:**

Well if you're going to set up a statutory system I suppose you could design elements of it that make sure that people weren't using a system in a silly way.

10 **MR LAURENSEN:**

Yes, and certainly I think that's the last bullet point under the top set there, that talks about – and the recently introduced restricted building work there is a requirement for – which is just at a residential end at this point in time, that does require people that are licensed building practitioners to fill in that form
15 called a record of work so it's effectively very similar to PS3 as being talked about from engineering perspective side. That's just about the individual putting their name to the work that they've done and also excluding the work that they haven't done so we see that as being a good move forward.

20 **MR HILL:**

Right, now onto question five, the when, why and how of peer reviews. Peer reviews have a place in a risk place consenting environment to provide independent and assessment related to the robustness of systems and their authors. We recommend that BCAs should continue to have the lead
25 responsibility in this area and the Institute supports the construction industry Council position of a three tier peer review system that I think was covered off yesterday around low risk consents of building work designed and built by LBPs should progress through easily, middle risk consent work should be able to be reviewed and considered by BCA officials, and high risk consented work
30 should require external peer review before being submitted for BCA consideration as at the pre-consent stage.

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So all tiers should be subject to individual confirmation of work and possibly a PS3 strike record of work could be subject to audit. There are opportunities around peer reviews and we think that the Ministry and building consent authorities can work together to bring about a clear and nationally consistent guidance around the process. Effectively controlling the function, the BCAs functional requirements. The building, looking at building types and their appropriate review requirements, and what are the expectation of the review outcomes, and possibly timeframes, when they are required and so forth.

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Just move on to question 6, should there be a building warrant of fitness to assess deterioration? You heard Mr Kelly talk about this subject earlier but the current building warrant of fitness is a safety system for daily operations and to provide a warning and safety systems in the event of evacuation. It doesn't deal with structures. It will for example it will not pick up on building modifications, damage to building structures or stability, unless they impact on a safety system and it gives, and therefore it gives no certainty of the state of the building at any point in time. So while there is an expectation that work is in accordance to the building codes, I think it would be reasonable to expect that this doesn't always happen due to naivety, neglect and in some cases avoidance. So you have a situation where I think the public believe that a building warrant of fitness most likely represents an attestation to a building's safety in all respects, but the reality is that it doesn't, and I think that comes about because of the motor industry's perception of a motor vehicle warrant of fitness. So we see an opportunity, unlike the Ministry, for a periodic review based around building fitness that will focus on structure, modifications and cladding that are specific to the building's use. We have no preordained cycle, but we're just possibly suggesting a five or a 10 year cycle check that will ensure that landlords who don't look after the building are aware – or landlords in the past who haven't looked out for buildings will need to be aware that they should be looking after their building in the natural course of events, and that they do and on that basis one would arguably say that the costs shouldn't be too high. I noticed that Mr Kelly covered the issue of cost, and he also thought that possibly under the dangerous building provision that

this area could be covered. We would argue that a building warrant of fitness is a proactive approach rather than a reactive approach.

MR LAURENSEN:

5 Perhaps just to wear a different hat for a second as a building owner, commercial building owner of one property in Dunedin. The personal view would be that it doesn't mean it's an additional process, it may actually be something that is akin to what prudent landlords are doing already and the question may go on about the relevance of that to insurance. There's an
10 advantage for a building owner to look after their building, so it doesn't necessarily involve an additional cost but we would see some value in that coming underneath a system that recognises the state of buildings.

MR HILL:

15 And so you then come to the natural conclusion, who will do this work and we would argue that accredited building surveyors would be appropriate. It's a niche area requiring specialist expertise. The diplomas in building control surveying would fit neatly in underpinning this type of work, and we believe that a regular accreditation process would maintain competency. And I'll just
20 add that the Institute already operates an accredited building surveyor programme in the home inspection area and complex buildings would be a natural extension to this programme. And we'd be looking to work with organisations such as IANZ on accreditation to ensure that we do get consistency and quality in the process.

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JUSTICE COOPER:

What was the organisation that you mentioned sorry?

30 **MR HILL:**

IANZ.

JUSTICE COOPER:

Thank you.

MR HILL:

And question seven, does the current framework impede innovation? There is
5 always risk with regard to innovation but our approach is that we don't believe
the current process impedes innovation but we certainly don't want to
encourage innovative failures. We support building innovation via sensible
approaches and we believe that innovation can be achieved under the current
10 system. I think the corroboratory to that is that the current system is probably
not well understood and therefore you have probably got a fair bit of
frustration around those that are wanting to introduce innovative systems or
products and I think David Kelly alluded to that earlier on today. The reality is
one can build anything as long as it complies with the building code. I mean
the classic examples on the slide there you will see is the cardboard cathedral
15 in Christchurch, that is innovation, that will have to comply to the code and it
will need to go through a compliance process.

MR LAURENSEN:

I think it's appropriate to mention it is something I covered earlier on that this
20 does have relevance in terms of the underline liability framework and so from
a building consent authority's point of view what we are saying is that there is
some methods already available on that last bullet point which talks about
limited life provisions. Well that's a situation where a building owner and
designer can put forward a reasonable case that says this is all that we are
25 asking for the building to perform to in terms of perhaps durability or the like
and you can then work through that in terms of proving in history use. So the
provisions are there but perhaps not as widely used and I think certainly the
liability framework has an impact upon that.

So these items actually follow on from that so the code mark process is a
30 nationally mandated process that suppliers and producer's products can go
through at the highest level. You then have Brnz appraisals which is a
product appraisal process. It is a testing based process that Mr Burghout
referred to earlier on. The determinations process is the one that is available

under the Building Act and it's worth noting that it used to be more of an adversarial sort of approach under the 1991 Act and the determination was primarily about an action that was taken by a Council, building consent authority. Now it actually can deal with products on systems prior to there
5 being any problems with those products and it can assess whether those systems will meet the requirements of the building code and that's a process undertaken by the Ministry and is binding on the parties so it is very good as a proactive one.

Warnings and bans I think again as Mr Kelly mentioned it, that that has been
10 in the Act since 2004 but hasn't had a lot of use or certainly no bans, what we see that as being an area that could be used for and I think the last point there the liability system we do think that's I guess in terms of the, raised against yesterday was comments about the Act now has some definitions of responsibility, this is the 2012 Amendment Act between a building owner, a
15 designer, the Council and the builder, but the underlying joint in several systems tends to mean when a Council act (inaudible 12:59:17) as the last man standing it does sometimes create some risk averse sort of processes. Those items are all methods we can achieve innovation still in the current system.

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MR HILL:

I am just wondering Your Honour how are we going for time, do you want me to –

25 **JUSTICE COOPER:**

You just go ahead thanks but don't rush.

MR HILL:

Okay, thank you. In conclusion, the institute supports a national policy
30 statement to provide vision and structure and direction to the sector. The development and distribution of public good standards needs a sensible funding model allowing timely access at a reasonable charge to ensure

improved knowledge, understanding and economic efficiencies across the whole sector.

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In terms of capacity, our belief is that the sector has moved on since the 2004
5 Building Act with a requirement to regulate BCAs. I think those improvements
have been considerable and they will continue to be considerable. An
example as we've already mentioned is BCAs working in clusters, the sharing
of expertise and resources, regulation 18 and the education and qualification
requirements. There is opportunity I think for mandating CPD in this sector,
10 as I've already mentioned. The Institute has the lead charge in developing
diploma course work for the building control qualification, we do this in
moderation with Otago Polytech and it should be noted that this work that we
undertake benefits not only BCOs as individuals, but BCAs themselves
significantly. A regionalised and standardised approach to consenting will
15 deliver consistency and maintain a much needed local ability and contact.
The issue of technology is obviously going to further enhance sector capability
and outcome quality through the, either the processing or inspection
pathways. Producer statements have a continued place for ensuring a test for
reasonable grounds of compliance, however we believe a national system
20 would advantage the sector. Peer reviews are a valuable tool and should be
controlled by BCAs and consideration should also be given to a national
process. And as mentioned, there's significant opportunity for a building
warrant of fitness to become a structure and cladding building fitness test over
and above its safety and health issues, health requirements, and we'd
25 encourage the Commission and others looking at this to give serious
consideration to enhancing the current product. The framework allows for
innovation and minimalises bad build quality. It's a process, in our belief, that
doesn't need altering. So all of those points sort of indicate that we think that
we've been through a journey of improvement and I think at times it's been
30 painful for some, but in my view having worked in a number of sectors,
regulatory sectors, we're on the right pathway. So that ends our presentation.

JUSTICE COOPER:

I've tended to ask my questions as you've gone along.

QUESTIONS FROM COMMISSIONER FENWICK – NIL

COMMISSIONER CARTER:

- 5 I noted as you went through that you were in favour of a centralised depositing for consenting documents. Do you envisage consented documents be held on a national record?

MR HILL:

- 10 I think that is the intent of the Ministry so that there'll be access to documentation nationally. But I'll probably have to defer to Mr Kelly to answer that directly.

COMMISSIONER CARTER:

- 15 And just one other, and that is have you followed at all the recommendations in from some of the structural engineering groups that there should be a grading system for buildings so that they get categorised in some way that enables you and the public to appreciate what type of building they have?

MR HILL:

I think that's, yes, and some of the importance level under 1170 already goes some way towards the type of building and whether it's for a large number of people or a particular type of use, so it does make sense, yes.

COMMISSIONER CARTER:

25 Were you attracted to that idea because it will bring I think arguments around the boundaries of whether our building is this grade or that grade et cetera?

MR HILL:

- 30 Absolutely, that's right, it's the right debate to have in terms of what is a building's use over its life. Yes.

COMMISSIONER CARTER:

So you'd like to see that looked at more, looked at more thoroughly perhaps, is that an interpretation?

5 **MR HILL:**

Certainly from a building consent authority point of view.

MR LAURENSEN:

I think there are opportunities by looking.

10

JUSTICE COOPER:

I've asked my questions, thank you. Thank you both. I must say to the officials, the building officials, Institute of New Zealand seems to me to be a very worthy organisation and it's very heart warming really to think that the initiatives for which you've been responsible and from my limited recent involvement in the local government area it's, things have certainly changed. So may I also thank you for the focus that you've brought to this which has been greatly appreciated.

15

HEARING ADJOURNS: 1.05 PM

20

HEARING RESUMES: 2.16 PM**MR MILLS CALLS**25 **GEOFFREY HALLAM (SWORN)**

Q. Now just let me get some personal details from you Mr Hallam before you go into your presentation. Your full name is Geoffrey David Hallam?

A. It is.

Q. You are the Regulatory Affairs Manager at International Accreditation New Zealand?

A. I am.

5 Q. You have a Bachelor of Science Degree in Geology with Honours from the University of Sheffield?

A. I do.

Q. You're a Fellow of the Geological Society of London?

A. Mhm, mhm.

10 Q. And you're a Chartered Geologist and a Fellow of the Institute of Quarrying?

A. I am.

Q. You've had 17 years experience in technical accreditation?

A. Correct.

15 Q. And you were for a period the programme manager of the IANZ Inspection Board Programme?

A. Correct.

Q. And during that time I understand you've been involved in over 60 building consent authority assessments personally?

A. I have, yes.

20

MR HALLAM PRESENTS POWER POINT PRESENTATION

Okay, accreditation has been alluded to quite a few times through previous speakers and I welcome this opportunity to give a little more understanding and explanation of what accreditation is all about, who we are first of all and
25 how we go about our business. Also that is not just a plug for us. There's a background to the questions on things such as the capability of BCAs to sign off complex buildings and from the knowledge of the assessments that we do, to be able to answer these other questions of use of Producer Statements et cetera so I'll just go through this and then please feel free to ask questions
30 as I go.

First of who IANZ are. We're an organisation created by Act of Parliament in '72. We were the second broad-spectrum accreditation body in the world which means that we accredit people or organisations in many different

technical fields. We are Government owned but we're a user pays, not for profit body. Our credibility comes not only from experience but also because we are internationally peer reviewed and our purpose for being really is to support both our clients, the people who are accredited, but also the client's clients which in this case includes the clients being the BCAs and their clients being the public of New Zealand, regulators et cetera who they deal with.

5 A little bit of definition here. The standards that we work to are generally international standards because of the nature of our work which is governed by international standards. So accreditation as we understand it, and as ISO
10 defines it, is third party attestation relating to a conformity assessment body conveying formal demonstration of its competence to carry out specific conformity assessment tasks. I know that's a little arcane but if we just pull it apart a little bit, the third party, meaning that we're fully independent of the organisations which we accredit, the conformity assessment body is an
15 organisation which inspects or tests whatever they're looking at and decides whether it conforms to a given specification which may be standard. It may be a regulation or it may be a contractual arrangement or requirement. From there we give a formal demonstration of the organisation's competence. Now the competence aspects means that although we don't give any guarantees
20 as to what, say, a BCA does on a day-to-day basis, we do have at the end of our process confidence that they know what they should be doing, they have appropriately competent people, and they have all the necessary resources to do that job. The fact that it says there specific conformity assessment tasks relates to the fact that we don't give accreditation to an organisation to do just
25 whatever they please. There's always a scope which clearly defines what they can and cannot do. In the case of BCAs that relates directly to the Building Accreditation Regulations. Now that's true in its entirety for BCAs that are also part of a TA but we also accredit private building consent authorities as they are called and they may have a limited scope. They may only, for instance,
30 look at less complex buildings rather than the whole range of buildings and also the private BCAs do not actually perform the final regulatory part of the process which is granting consents and CCCs at the end of the process. They act as contractors to the BCAs that are TAs. The reason I put that

accreditation definition there is because the word “accreditation” is often used in many different ways with more or less meaning behind them. This is not a rubber stamping exercise.

5 The definition is there to define that but then behind the definition is yet another ISO standard, ISO 17011, and that standard defines what an accreditation body does in relation to that definition and that's a standard which is used worldwide. It's used to define how accreditation bodies work so that the accreditations performed under that standard are accepted by the WTO for international trade purposes. This is really part of a much bigger picture. The credibility that we have is underlined by the fact that we are regularly evaluated by our overseas peers and so that happens at least once every four years and sometimes more because there are a number of different organisations that organised those peer evaluations. We're very picky about terminology in our field. I'm trying not to be too sort of pedantic and picky about things but there are some terminological things which mean very precise things in our field so on the basis of these evaluations IANZ accreditation is recognised in over 60 economies worldwide.

JUSTICE COOPER:

20 When you're assessed or reviewed, sorry I may have used the wrong word there.

MR HALLAM:

Evaluated, but that's all right.

25

JUSTICE COOPER:

Evaluated, sorry. That is as to your compliance with ISO 17011 is it?

MR HALLAM:

30 Correct.

JUSTICE COOPER:

I didn't quite follow why that would happen more than on a regular basis.

MR HALLAM:

Well because we have to continue operating to that standard.

5 JUSTICE COOPER:

Yes so you said where you're evaluated every four years and sometimes more often. It's the sometimes more often I'm not following.

MR HALLAM:

10 The reason being that sometimes we have joint evaluations. The way this works is that in the world as a whole there are a number of regional bodies which represent accreditation bodies such as APLAC for instance which is the Asia Pacific Laboratory Accreditation Cooperation. The fact it has Laboratory in the title is historical. It now includes inspection. Then there's EA which is
15 the European Accreditation Cooperation, et cetera, IAAC for Inter Americas and so on so there are these regional groups. Generally we're evaluated by one of those organisations at a time but sometimes there are joint evaluations.
1426

20 So the reason that we may be seeing more often than once every four years is not due to poor performance it is just the way the logistics works, okay. So we are evaluated and that is a very rigorous process and this is the general framework into which all of that fits.

So at the top, not the very top left-hand corner that's, I will come to that at the
25 end. At the top there is the government regulators who make the laws and regulations and they generally, worldwide, they generally own or endorse the accreditation body. In our case we are owned by the Government. Accreditation bodies in the green box there, we accredit conformity assessment bodies to assess their competence to do specific jobs and the
30 types of organisations which we generally accredit are below there which includes laboratories, inspection bodies and so on. Now in New Zealand and Australia there are actually two accreditation bodies and JAS ANZ is the other one and we do not perform accreditation of the right three boxes there, but

this is just to show the overall international model of how accreditation works. And then you will see to the left there slightly down is the BCA system. The reason for putting that where I have is because all of the other accreditation types are done to international standards. The BCA accreditation is done to a regulation in New Zealand rather than an international standard.

JUSTICE COOPER:

The brown boxes who are described as inspection bodies systems, certification bodies and so on, who are they?

10

MR HALLAM:

Well they are – well they are a mixture of bodies. In general most of them are commercial organisations, businesses, performing laboratory testing, various inspection functions, the system certification is people such as ISO 9000 quality system certifiers.

15

JUSTICE COOPER:

So this is – you're accrediting certifiers here, is that right?

MR HALLAM:

Well we aren't because the right three boxes there are actually performed by JAS ANZ not IANZ. JAS ANZ as being a separate organisation.

20

JUSTICE COOPER:

And are they privately funded?

25

MR HALLAM:

No they are a treaty organisation between Australian and New Zealand government.

JUSTICE COOPER:

What does the J stand for?

30

MR HALLAM:

Joint, joint accreditation.

COMMISSIONER CARTER:

So they would verify something like (inaudible 14:28:59)?

5

MR HALLAM:

They would, yes we do not do that.

JUSTICE COOPER:

10 So when I was – many years ago in a law firm and it was ISO 9001 accredited?

MR HALLAM:

Certified.

15

JUSTICE COOPER:

Certified. Who would have done that, there would have actually –

MR HALLAM:

20 The organisation who was doing the audits of your company would have been a system certification body and they would probably have been accredited by JAS ANZ.

JUSTICE COOPER:

25 I see.

MR HALLAM:

Because JAS ANZ and us are checking the competence of people to do those jobs of assessing either things in terms of testing laboratories or inspection
30 bodies and so on.

JUSTICE COOPER:

And you evaluate them?

MR HALLAM:

Who?

5 **JUSTICE COOPER:**

The inspection bodies?

MR HALLAM:

We assess the inspection bodies.

10

JUSTICE COOPER:

You assess them?

MR HALLAM:

15 Yes and I will go through the process shortly and explain just what we do
because there can be a perception and I have noticed it with a number of
many people talking about the whole BCA process and other areas, there can
be a perception that this is all part of a great sort of bureaucratic system which
is all about rubber stamping people all the way up the line. It actually isn't
20 bureaucratic in that sense at all and I have explained the depth that we go
into.

JUSTICE COOPER:

Thank you.

25

MR HALLAM:

So I will just go over what we do to BCAs in this case in order to accredit them
so that you understand the depth to which we investigate what they do and
what they are capable of.

30 First of all we get a copy of all their documented systems, so this is quality
systems but also all of their technical procedures and a description of what
they do and how they do it and we check that in a non-technical way to just
check that they have actually got all the bases covered initially. In other

words if they have got procedures and processes in place which look as if they will deliver on the requirements of the building accreditation and the Building Consent Authorities Regulations 2006. At that stage that is a largely theoretical assessment but it is to make sure that we don't arrive on site and
5 find there are big holes in the systems. We then put together a team to do the assessment that will consist of one or more IANZ personnel and we are there to lead the process, to facilitate the whole process and to assess the management systems in the client.

As well as the IANZ person or persons we have one or more technical experts
10 with us. They are generally peers of the people that we are assessing. In this case for BCAs they may be people from other local authorities or they have largely been in the early rounds of accreditation technical experts provided by the Department of Building and Housing as it was in the early rounds and MBIE now. So they are people who have been recognised in the field as
15 being experts, they are people who are respected in the field. We get that team together and we agree a date when we will go and the assessment of a BCA generally takes, well it always takes place on site and generally lasts between there to five days which is, should be sufficient time to get a reasonable in depth look at how the operation happens and what they do and
20 what they produce.

So while we are on site we look at all stages of the building control process. We sample that of course because many BCAs have very large quantities of work and we are looking there first of all to see if the BCA's documented procedures are being followed. In other words are they doing what they say
25 they will do.

Second but very important if more important aspect of this, is that a sample of consents is reviewed by the technical experts in detail to determine if outcomes are technically correct. So what that means is that our technical experts will go through a selection of files which are picked to be
30 representative of the types of work that the BCA performs and also is picked to sample through the different people that they use, their staff members so that we get a reasonable view across the whole organisation to see if what they are producing is actually correct.

JUSTICE COOPER:

Where do you get this expertise from?

5 **MR HALLAM:**

The technical experts?

JUSTICE COOPER:

Mmm?

10

MR HALLAM:

So they are people, basically they are peers of the people we are assessing.

JUSTICE COOPER:

15 But are they on your staff or are they –

MR HALLAM:

No they are not –

20 **JUSTICE COOPER:**

- or are they contracted?

MR HALLAM:

No they are contracted or loaned or volunteer, historically we used to get technical experts for free. That is not longer the case because you know, the world has changed in the time I have been with IANZ. So generally we now have to pay these people but they're identified as individuals who are respected in the field and recognised as being experts in the field. As part of the process which is also defined in the international standard when we put forward an expert the client body, the BCA has a right to veto an individual for any reasonable reason which would include if they thought they weren't technically competent.

25

30

So we look in the office at what people are doing consenting applications for building work and the whole process around that in some considerable detail.

The technical experts will both look at files of completed work, they will also interview individuals working on current files or past files and question them technically about why decisions were made, how they approached the job, what the outcomes were. This is particularly the case if the technical experts
5 believes that there are some issues with a particular job they will discuss those issues with the individual who did the work.

1436

We also, because BCAs also undertake site inspections during construction, have team members go out on site and witness what inspectors are doing
10 onsite, and they look at the entire way that that job is done, from the communication with the client through the discussions onsite with whoever's onsite at the time, be it the owner, the builder, the builder's agent, various tradespeople et cetera, they'll talk to them and then they'll look at the physical work. They look around to see, this is the inspectors and we're watching this,
15 the inspectors go and make sure that the drawings and specifications are available onsite, and then they inspect the building work as it progresses to see that the building work is actually taking place in accordance with the plans which have been consented. If they find issues with that, things are done. But I actually get to the BCA process in a moment.

20 Having watched that we are, we look at the training records throughout the organisation because BCAs now have to have under the regulations robust training processes to identify what training is required, to make sure that that training is delivered, and then to assess the effectiveness of the training in actually upskilling people. So just going on a course is not sufficient. They
25 actually have to have assessment after that to prove the training's been effective. So in quality terms it's one of those closing the loop processes that we do to make sure that the whole thing is effective.

During our assessments the technical experts will look at what the person's doing onsite, or what the processor is doing, and then they'll compare what
30 they see as the output of that person with the declared competence of the individual in the BCA's systems. If there are discrepancies as we see it there, that will be discussed and may result in further action.

We look to make sure that the BCAs have all the reference documentation that they need. This is things such as the Building Act and all its amendments, accreditation regulations, relevant published standards, guides et cetera. So we make sure that we have all that up to date information available. We make sure it's there when they need it. This may be in paper, it may be on tablet computers or whatever. We don't mind how it's done as long as they have appropriate access when they need it.

Inspection equipment is checked for availability, suitability and where relevant calibration. Some of this may seem fairly trivial, but if an inspector arrives at a house, for instance, and doesn't have a ladder to be able to look in the roof space, then they can't do the job properly. Some of the simplest pieces of equipment can be the most critical.

In addition to the practical work that we watch, and the background systems, there are also more core quality system requirements for BCAs. They're required to have continuous improvement processes. They're required to undertake internal audits of their own activities and to monitor their own performance. Many of these things are common in industry. They were not common with BCAs before the accreditation requirement came in.

BCAs are also required to have systems for managing inquiries and complaints relating to building control, from any party, and IANZ assesses the effectiveness of these systems. So we follow through particular cases to make sure that not only have they cleared complaints for instance, but they've done so in an appropriate way. If they have, they have to have continuous improvement processes and we make sure that they are identifying issues, and that they are actually addressing them and then checking that the things they've done to address those issues have been effective.

JUSTICE COOPER:

Q. Are these requirements all springing from the 2006 regulations, or are some of them?

A. Yes, from the accreditation regulations.

Q. Is it usual for, I mean I haven't been familiar with these regulations previously but they're very detailed, is it, I mean it must make your task easier in some respects to have such a checklist established?

5 A. In some ways it does. I would say that these regulations, I mean we didn't write the regulations, but the regulations are in place and this is what we work to, they are fairly close to ISO 17020 which is an international standard for accreditation of inspection bodies.

Q. So that would have been their inspiration do you think?

10 A. Yes it was. In fact that was originally proposed when the Building Act came out as the basis for the accreditation of the BCAs but through the consultation process it was decided that rather than use the international standard, at the time there was a perception that the international standard would've been too high a bar for the BCAs to get over.

15 Q. And do you supplement this at all by adding your own matters or other matters do you think should be evaluated?

20 A. Generally no we don't. I mean there's a lot goes on around and behind this, but, and these are the basic things that we're looking at. I would say that my description here is not comprehensive. I'm not going through every part of the regulation. I'm giving you a snapshot of this. I mean there's a lot of very detailed things in here about exactly what's involving competence assessment for instance, which I don't propose to go through unless you wish me to?

25 Q. Well no, but I just wanted to get a perspective because this seems to me to have been very thoroughly specified –

A. It has.

Q. – and, but your work would involve evaluation of a vast range of organisations. In terms of a scale is this at the very well specified end, or is it about average, or is it, heaven forbid, sparsely specified?

30 A. No, this, much of it is very similar to the international standard. There are a few bits which are less well specified and less precise. But equally there are some areas such as regulation 7 which you don't need to know in detail, but that really covers the process, the BCA process.

And that is in considerable detail as you'll see. I mean there's a page and a half of it there and that covers a lot of fine detail, so it's more, to answer your question, it's more precisely specified for the BCAs in the specific areas of their work. So it's like an ISO 17020 specifically tailored to BCA work. And so a lot of the things which are in regulation 7 in particular do actually refer back to things which are in the Building Act. So they are requirements and duties under the Act which we are checking that the BCAs actually do fulfil, and I think that's why it is so detailed.

10

COMMISSIONER CARTER:

Q. Organisations that are building consent authorities have a lot of other duties as well as consenting to building construction, so presumably your work is just directed at their role in regard to consenting to building?

15

A. Yes. Yes as we say, they have a scope of work which is basically these regulations for a BCA. Other organisations doing other things of course have different requirements, but I'm limiting myself to BCA accreditation.

EXAMINATION CONTINUES: MR MILLS

A. So at the end of the process when we've finished our several days on site with a team is that we report to the management what we've found, and if necessary corrective actions are raised. In almost all cases corrective actions are raised because it's almost, almost unheard of for an organisation to go through several days of assessment and us to find no issues that we feel need some corrective action.

25

Having given those findings to the BCA management we then leave site, but at that stage they know there will be no surprises when they get the written report which follows.

30

Once they've had the report they have an agreed timeframe in which to action corrective actions, and we must be satisfied as a team that those have been effectively addressed. If they are system related things then the IANZ staff member will see the result and clear it or not, and if

they're technical issues they will go to technical experts who are involved on the assessment team and the responses must satisfy them. Generally the responses are in the form of documentation records et cetera which are sent to us, but if things are particularly serious in the corrective actions we find, we may have to go back and do a full or partial reassessment, depending on what we find.

5

1446

So this is very much a sort of measured response to what they are doing, we don't just go and sort of keep on assessing them because we need the work. We do it because we do the work until such time as we have confidence that they are doing what is required to the minimum level that they need to at least.

10

And just to finish this little bit about what we do, assessment is not a one off event. So when BCA has been assessed, and assuming they've cleared all the conditions et cetera, then they are accredited. After that there is actually another process which can be – undertakes to register them as well, that's a regulatory process which we have nothing to do with but the accreditation is a pre-requisite for registration under the Act, and then following on from that BCA's are then re-assessed by us every 24 months.

15

20

So just to sum that up, the accreditation process really ensures that accredited organisations have effective management systems, they have reliable training and competence assessment systems, they have formal more systems for allocating work to competent people, I'll expand on some of these things in the next few slides, they have checks and balances where required to make sure that as far as possible errors are picked up and any other gaps are filled before the end of the process, systems are in place for self-auditing, performance monitoring, continuous improvement and complaints management and we check that they're effective, and they also have effective record keeping systems.

25

30

Now the record keeping systems leads to another little detail of the system really, in that the whole of the accreditation regulations and what they apply to is quite precisely sort of ring fenced in the process. Within Territorial Authority under their building control activities, there are a number of activities which move backwards and forwards from the BCA as defined in the Act, to other parts of the TA. When we're doing our assessment we do not look over that fence because we're not mandated to do so, so just as an example if there's a notice to fix, is raised by someone in the BCA, they have to do that or they can do that, others can too. We will look at whether or not a notice to fix has been raised appropriately, that it's worded appropriate et cetera. That for the enforcement side of a notice to fix moves to the TA and we don't look at that side of it. So there are limits, we get to that limit and we stop and that also applies to record keeping in that the BCA has to keep records during the time when it's handling the consent to the documentation, once the process, their process is completed the responsibility for looking after the records goes to the TA. So long term record keeping is outside of our views, and there are a number of areas like that, like we don't look at swimming pool fencing for instance because that's outside, strictly outside the BCA's responsibility. So now after that rather long introduction and explanation, we get to the questions which we were actually asked, as you can see I hope that that was useful in answering the next question.

25 **JUSTICE COOPER:**

Well it was very informative thank you.

MR HALLAM:

30 So the question, the first question that was asked was do BCAs have the capability to sign off complex buildings? And this really then, the slide reflects our working of those systems which I've just described so every application to a BCA for a building consent, first of all it's checked for completeness first but once it's accepted by the BCA as being a valid application, it's allocated to a

level of building complexity. Now this was touched on I think by previous speakers that there is when we first started doing this each BCA actually generated their own levels and their own categories of building and some of them still use those categories but now MBIE has put together a national competency assessment framework which includes levels of complexity of building.

JUSTICE COOPER:

Who's produce that sorry.

10

MR HALLAM

The Department of Building and Housing as was. There is no requirement for BCAs to use that national system but many of them now do, and that consists of six levels of complexity and this sort of refers back to comments made at the end of the morning session about call-out and things like that where it is possible for MBIE to actually require some things to be removed from BCAs and used and processed separately.

15

JUSTICE COOPER:

I have questions of my colleagues. I was asking them whether they'd seen this document setting out the six levels of complexity and –

20

MR HALLAM:

I don't have a copy of that here, it's quite a big folder. I do have a copy but not here and it outlines not only the six levels of complexity, that's not what the whole document refers to. The document is all about the assessment of competence of building officials but built into that is this scheme of six levels of complexity.

25

JUSTICE COOPER:

Do you say it is – it's not compulsory to –

30

MR HALLAM:

It's not compulsory that they use those six levels of complexity but it's highly recommended.

JUSTICE COOPER:

- 5 Do you say that as part of your evaluation process you would check to see whether they were using that system or had an acceptable alternative?

MR HALLAM:

Yes.

10

JUSTICE COOPER:

And is that another requirement to regulations?

MR HALLAM:

- 15 Well it's a requirement that work is allocated to persons who have the appropriate level of competence and that is part of this process.

JUSTICE COOPER:

This is a principle basis upon which that would occur?

20

MR HALLAM:

- That's correct because as I say in the next point there, the first point is that every allocation is given a level of complexity, it's – the application's looked at and it's decided what level it is at and every building official has now been
25 assessed for their competence using the same complexity levels. Now when I said the same because it's not compulsory different BCAs have different schemes but even if they have a different scheme their competence assessment process uses whatever scheme of complexity for buildings they use, so if they have eight levels then they will assess their people against
30 eight levels but the national scheme put forward by the Ministry uses six.

JUSTICE COOPER:

Would it be possible in terms of the approach that you take for these things for a building consent authority to say well, we've got 10 people on the staff processing building consents and we'll allocate the jobs according to – we'll just go, through one to 10 and do it that way?

5

MR HALLAM:

We had seen some of that sort of things in the early days before accreditation.

JUSTICE COOPER:

10 But it wouldn't happen now?

MR HALLAM:

No.

15 **COMMISSIONER CARTER:**

Would an authority be classified in accordance with how complex a structure they are capable of evaluating?

MR HALLAM:

20 No they're not because under the Building Act, a building consent authority has to be able to deal with anything which can come across their desk but I'll explain as I go through this presentation how that's dealt with because that directly answers the question which has been asked. So I'm just going through the process that they go through in general terms so every building
25 official has been assessed against whatever complexity levels they use and then the accreditation regulations require work to be allocated to persons assessed as having the necessary competence for that particular project.

I've sort of skipped the first one really but that first bullet point should really have been at the beginning of the previous slide, but that's okay. So now the
30 second bullet point is following on from the previous slide, building officials or contracted experts undertake a detailed assessment of the submitted plans and specifications so this is definitely not a rubber stamping exercise. They go through the whole bundle of documentation which may be very extensive for a

complex building and they undertake an assessment of that material to establish compliance with every applicable clause of the building code and it's at that stage that quite often additional information is required.

1456

- 5 This has already been said by others, but there is – our experience has been that there's a high level of – a large proportion of the applications which are received by BCAs which are deficient in various ways. They don't have sufficient detail. They don't specify in enough detail to be able to establish compliance with the Building Code. That is not necessarily the same thing as
10 saying that they're not adequate from an engineer point of view. They may be perfectly good engineering wise but they don't necessarily show enough detail to establish compliance with the Code.

It's also at this stage that formal peer review may be requested by the BCA. So that's quite a long a detailed process. When compliance with application
15 with the Building Code is confirmed then, and only then, is a building consent granted. Once that's granted and there are various processes around that and time-scales and so on to be considered but once the owner has got the consent they are then free to go and start building. I am ignoring the Resource Management Act issues and planning issues generally because
20 obviously they have to have that as well but that is outside the whole accreditation area.

JUSTICE COOPER:

Do you know why?

25

MR HALLAM:

Presumably because it's a different Ministry that deals with that sort of thing and this was all building and housing around the leaky building issue originally which is why it originated or kicked it off and so that's the only reason I can
30 imagine.

COMMISSIONER CARTER:

Do you have to be local government agency to be a building consent authority?

5 MR HALLAM:

You do to be a registered building consent authority but in the country there are 72 BCAs in all of which five are private organisations but they are not allowed to actually issue consents or CCCs but they do all of this technical work I'm talking of and then they effectively give a recommendation to the registered BCA which is part of a TA to actually grant the consent, the legal document that allows you to build. So once construction is underway inspections take place. Those are not defined in legislation so the inspections that take place maybe slightly different from one BCA to another but at the various stages they're defined the owner or the owner's agent has to ask for those inspections and the building inspector will go out and confirm that construction is taking place in accordance with the consented plans and specifications. As was mentioned by a previous speaker this morning, that was a major change from the previous Building Act, 1991 Act, and under the old Act the building inspector was personally looking to see whether or not the building activity was taking place in accordance with the Building Code. They had a lot of autonomy in that respect. Now, the emphasis has moved to the building inspector checking that building work is taking place in accordance with the consented plans and that's where this issue was raised this morning comes in about amendments to plans and as-built drawings that if there is a significant or major amendment during construction that has to go through the consenting process again, not from scratch but for that particular aspect of the building. It is important though that when a BCA looks at a proposed amendment that they do consider it in terms of all the other areas of the building because even though it may seem to be quite a small change it may affect compliance with many other parts of the Code.

So if construction is significantly different from the approved design then remedial action is required by the inspector or it goes back round through an amendment process to the drawings.

An important aspect of what BCAs do is to keep good records of what happened. So records are kept of who worked on each project, this is everybody who worked on the project for the BCA, not the builders and so on, so that's the BCA staff and the contracted experts. BCAs contract out work that they do not have in-house competence to handle so this is a managed process and that contracting out of work may be to another accredited BCA or to another professional practice, an engineering practice or whatever is appropriate. And decisions made during processing and inspection are recorded. An interesting thing which we've made much of during accreditation process is that Regulation 6 requires not only that the decisions are recorded but also the reasons and the outcomes and that has greatly improved the records kept by BCAs and it means that because those records are now kept if there are any issues arising, failures for instance of buildings in the future, it will be clear why the decisions were taken and on what evidence they were taken. That has not always been as transparent as we might like in the past as you've probably found from some of your own deliberations of late.

So moving on to the other questions which I'll actually deal with in quite short order now;. The question of whether or not there should be centralised building consenting. This is a policy issue so it's not really something for me to express a strong opinion on I don't believe but there are significant arguments for and against. There are certainly issues around the consistency across the country which could be improved by having a centralised or regional process but there are also some negative sides to that. One of the things that we see in particular is that one of the great values in having a BCA which includes both processing and inspection is when there's good feedback and co-operation between the individuals doing the consenting and those doing the inspecting because there can be situations in which something is consented but is unbuildable in practical terms and we have seen in some authorities, particularly the larger ones, where there can be a breakdown of communication and co-operation between the consenting staff and the inspection staff and that is not good because they don't find out what the issues are arising in the area and that loses a positive feedback effect of helping to train people in both sides of the business.

So a single organisation with local or regional branches could realise those advantages of a centre of expertise as has been described this morning and that will be good because there is a limited pool of people with the expertise to deal particularly with very complex buildings in the country but I think
5 whatever plans are put in place it should take into account the disadvantages which are also there of making disparate organisations responsible for different parts and losing the effective communication between them. If the centralised body is seen or, knowing the personalities in this business, the inspectors will tend to see them as ivory tower people who you can't talk to.
10 Conversely the people at the centre in that situation would probably have the view that, you know, they were above the inspectors and shouldn't take too much notice of them. I say that out of the experience of having seen particularly large BCAs where some of this does already occur.

I recognise that Auckland, the Auckland situation now with the super city,
15 could already be considered to be a Regional Building Consent Authority as it already covers approximately a quarter of the population of the country covering a large geographical area and evaluation of the effectiveness of Auckland in meeting the goals of central processing could inform the practicality of a National or Regional Building Consenting outfit. However, at
20 this stage it's too soon really to draw conclusions from Auckland as systems and processes are still bedding in there from the amalgamation of the old authorities around the Auckland region.

1506

Producer Statements are not called up or even mentioned at all in current
25 legislation. They were there under the previous Building Act. Producer statements may be accepted by BCAs at their discretion, and they can be a very useful method of establishing compliance of particular aspects of a building, particularly if the BCA does not have expertise in that particular area. This is one avenue they can use to accept a professional opinion from
30 someone. But equally BCAs have no legal right to require producer statements, because they have no legal standard. We heard the last speaker this morning saying that it is common for BCAs to ask for producer statements. They can't require it but often it's seen as a pragmatic way of

getting the right information. There have been lots of issues around producer statements. When the producer statement scheme was first put in place it was intended to be used by design professionals as a way of providing assurance that a design or practical work had been completed professionally and properly and in compliance. Over the years that system was then extended by BCAs because they saw it as a valuable way of doing things, to many other areas like waterproofing, tanking, but all sorts of things including cladding and roofing and all sorts of different issues which was not really what it was ever intended for, but it was used in that way. Because, I know this is a repetition but it's relevant, because the accreditation regulations require BCAs to record all the decisions and reasons, if a producer statement is used as the sole means of establishing compliance then the reasonable grounds for accepting the statement must be recorded and this is where there are, if you like, at least two different levels of producer statement. There are those accepted by an authority as the sole means of establishing compliance, in which case they have a duty to gather sufficient information to convince themselves that the author of that statement is a credible person to provide that information and to give them confidence that they can rely on that information. The other type of producer statements which some BCAs also like to collect are bits of paper which are only used in addition to the outcome of their own inspections. Now really they seem to like to have those as a matter of additional assurance, but in fact they have no real weight, and therefore they have no duty to do any further investigation into the authors of those producer statements which are not used as the sole means of establishing compliance.

Those two categories are things which we've sort of clarified through the last few rounds of assessment, because it wasn't at all clear in the early days just what the differences were and it was becoming very onerous for BCAs to have to establish the competence and reliability of all producer statement authors, and that's where a lot of these issues around registers of authors became a problem. But certainly it would be good to have some authoritative guidance from MBIE preferably on the acceptance of producer statements. There has been some guidance given in *Codewords* which is newsletter put

out by the Department of Building and Housing as was, but that is the extent of the currently published guidance, and that has no real, it has no authoritative weight. It's guidance and no more.

5 **JUSTICE COOPER:**

Q. You're talking about guidance under the Building Act are you?

A. Yes, of just –

Q. The technical term?

A. Yes. A formal document which is, they've this, now this hierarchy of documents, regulation down through.

Q. That's what I was asking you.

A. Yeah.

EXAMINATION CONTINUES: MR MILLS

A. I do know that MBIE is working with IPENZ currently on a document. It has already, I've seen drafts of it and it's already quite a thick and complex document, but I know that the sector would value a document which gives them clear guidance on when and how they should accept producer statements.

A. Peer reviews, I'll only touch on this in the most cursory of ways really because it's not an area we get heavily involved in. It's important that everyone realises that engineered designs are by definition unique. They're a one off case, and therefore consideration of the need for a peer review of a design in particular has to be on a case by case basis and the decisions in our view should be risk-based, so the BCAs should not require peer reviews of every design that comes in by an engineer, but there should be some process as yet undefined which determines a level of risk involved and then whether or not there should be peer review. In our view peer review should be independent and the simplest way to do that would appear to be to have the BCA to commission those peer reviews, rather than a designer themselves. We have not, I haven't, seen any evidence of what was suggested this morning of

designers having a sort of buddy system where they review each other's designs. I haven't seen that evidence.

IPENZ practice note 2 defines the types of reviews and when a peer review is requested, particularly by a BCA, it really must be clear what type of review's required because there's again been quite a lot of confusion there over the difference between a professional peer review of a design against good engineering practice, as opposed to a regulatory review for the compliance of the design with the building code. And so sometimes we saw in the early days of accreditation assessments, peer reviews which stated little more than, "I agree that this design is in line with good engineering practice." That obviously has its value, but it's not what the BCA requires to inform its decision on compliance with the building code.

I think those issues are now reasonably well clarified with BCAs and we're not seeing those issues so frequently anymore.

And finally does the current framework impede innovation? This again, there's hardly ever a yes/no answer to these questions. I believe from our understanding of it that the current system, which is based on compliance with the New Zealand Building Code which is a performance-based standard criteria, means that acceptable solutions are provided for everybody's use but alternative or innovative solutions are also allowed.

So that, the simple answer then is no, I don't think that innovation is impeded by the current framework, however as was mentioned this morning the practice is, especially in many of the smaller BCAs, that they encourage people to use the acceptable solutions. Partly it may be because they don't have the immediate in house capability to deal with alternative solutions, but as mentioned earlier they can and do subcontract those things out when they get them, but there is also the issue of timescales in which there is more work, more people involved to deal with an alternative solution because there's more engineering analysis has to go on, and therefore it's easier for all concerned to just

follow the acceptable solutions. So the answer is no and yes. I think that concludes.

QUESTIONS FROM COMMISSIONER FENWICK - NIL

QUESTIONS FROM COMMISSIONER CARTER – NIL

5

JUSTICE COOPER:

Q. Is Auckland Council accredited?

A. Yes they are.

10 Q. They must have got on to the job very quickly after they were formed did they?

A. I beg your pardon?

Q. They must have got on with making applications for accreditation very soon after they were informed?

15 A. We have been working quite closely with them during the amalgamation process.

Q. Were the constituent councils all accredited?

A. Yes they were.

Q. They were.

20 A. Of course the new council is not the same as the previous councils. The new system's in place.

Q. So having been formed in November 2010, that council would have a period of grace before it had to comply with all the regulations.

1516

25 A. There's a gazette notice on that I believe which has sort of put a – because there was originally deadlines for all of the councils following the inception of the scheme but of course they were formed after that so the original deadline didn't apply to them.

30 **COMMISSIONER CARTER:**

Seventy organisations to assess every two years.

MR HALLAM:

Indeed, yes it was very busy.

5 **JUSTICE COOPER:**

Has anybody failed to be accredited having made an application?

MR HALLAM:

10 No I think they all eventually got through. Some of them took longer than others.

JUSTICE COOPER:

And when you say some of them you're talking about BCAs that were
15 Territorial Authorities?

MR HALLAM:

Yes. There was an expectation originally that the large metropolitans would just sail through and that the small ones would struggle. That proved not to be
20 the case. That's not to say that the opposite was through either. It was very mixed. Some of the small ones found it relatively easy to go through the process and although it meant a lot of change for them, small organisations found it easier to turn around and change the way they were doing things and make a big difference quickly and some of the large ones did too, but equally
25 some of the large ones it took quite a long time to get through.

JUSTICE COOPER:

So your power is to accredit or decline accreditation?

30 **MR HALLAM:**

Correct.

JUSTICE COOPER:

You can't do anything else?

MR HALLAM:

What we did, what we do though during that initial accreditation process
5 having assessed an organisation, there may be many, many corrective
actions they have to deal with before they gain accreditation and that process
may go round several iterations before the final answer comes out. I mean our
purpose is to help them within limits to get the accreditation, we can't do
things for them but we help them along the way by telling them basically
10 where the holes are and then they fill those holes and then they're assessed
for the effectiveness of that corrective action. So it's not a matter of – I mean
we can fail somebody completely but if we do it's only because they've given
up wishing to be accredited really. They can work at it until they get there, it's
a matter of (overtalking 15:18:49).

15

JUSTICE COOPER:

The answer's got to be yes because I mean if you said no, you can't be
accredited to some Council there wouldn't be any means to getting building
consents in that Council's district.

20

MR HALLAM:

Yes there is, under the Act they have two options. They can choose either to
be accredited or to transfer their powers to another TA and that can be done.
Under the law that's allowed, so I mean whether they choose to do that –

25

JUSTICE COOPER:

(overtalking 15:19:18)

MR HALLAM:

30 (overtalking 15:19:19) without even going through the process they could, and
that's –

JUSTICE COOPER:

You'd have to find somebody who was willing to take over.

MR HALLAM:

Yes you would, that has happened in the particularly specialised area of dams
5 which also comes under the Building Act and in that case there are three I
believe authorities that do most of the consenting of dams in the country.
That's not including the unitary authorities but most of the dam consenting is
actually done by only three authorities, regional Councils.

10 **COMMISSIONER CARTER:**

In the interval when a BCA has not yet satisfied the expectations here, they
can still carry on in issuing building permits.

MR HALLAM:

15 They can't now because that deadline's passed, but that would have been the
case. Yes, there was a statutory deadline by which they had to be accredited
or cease to do the work.

JUSTICE COOPER:

20 Your Act of Parliament does that set out what your powers and duties are?

MR HALLAM:

Yes it does, yes. The statutory body that we are, we're not called IANZ
officially, we are called the Testing Laboratory Registration Council.

25

JUSTICE COOPER:

I can understand why you've called yourselves IANZ.

MR HALLAM:

30 Yes we are the operating arm of the Testing Laboratory Registration Council.

JUSTICE COOPER:

Trading as –

MR HALLAM:

Yes that's right.

5 **JUSTICE COOPER:**

And you don't have any funding issues?

MR HALLAM:

10 That's a leading question.

JUSTICE COOPER:

You could choose on to – well it is.

15 **MR HALLAM:**

We are a user, user pays, user funded. We don't get money from the Government so we are funded entirely from the fees from accreditation.

JUSTICE COOPER:

20 So you're paid voluntarily by Territorial Authorities seeking accreditation?

MR HALLAM:

And all the other organisations that we accredit of which there are sort of over 800 I believe now. So we do have quite a sizeable business, so the 800
25 doesn't include the BCAs.

JUSTICE COOPER:

And you calculate to make enough money to pay those who are coming from abroad to evaluate you?
30

MR HALLAM:

Yes the way that works is they have to pay that, but equally we have to provide people of which I'm one who goes overseas as part of teams to

evaluate other people's accreditation systems. It is a peer review process, peer evaluation I should have said. So even those of us working in the field let alone those who are not familiar with it.

5 **JUSTICE COOPER:**

Well I'm pleased to hear that, thank you very much Mr Hallam. Now we've got a panel discussion coming up but first we've got to hear from Mr Burghout and Mr Bradley. Do you gentlemen have a preference – you'd like to come next Mr Burghout. That's fine thank you. You can acknowledge the affirmation
10 previously made.

MR BURGHOUS - ACKNOWLEDGES AFFIRMATION

MR BURGHOUS:

15 And I'll just dive straight into the presentations (overtalking 15:23:00) way to go and I'll just make sure the mouse is working. Can you go back to number 2, and I'm just repeating the same comment we made yesterday that the system's not broken but can be improved on. In terms of the quality regulatory framework, the CIC considers there is sufficient capability to ensure
20 the framework and it's a whole bunch of things working together can be of high quality and timely but it does require the key parties MBIE standards, researchers, industry to work as an integrated whole and I think that scene has been woven through much of today. That integration has not worked perfectly to date but we're hopeful that the changes from DBH to MBIE will
25 allow for a more cooperative integrated approach. It does require the resolution of the fundamental issue between the detail of the code and the funding supported standards and again that's been much of the theme for today. You can see how I crafted these slides a week ago so things nicely shift in a week sometimes.
30 BCA capability. Without wanting to comment on BCA capability per se, what the industry looks for is certainty, consistency from the consenting framework. There'll be a number of builders in Christchurch for example who operate across a number of Territorial Authorities, a number of BCAs and they'll

lament the fact that they have to submit for the same home or the same building multiple designs, multiple different forms for the different BCAs and it's that issue of certainty and consistency that the industry's looking for and better systems in and collaboration between BCAs would help provide that, but in the absence of that collaboration and certainty the CIC has promoted a single national consenting authority as a one way of achieving that certainty and consistency and would also ensure capability but like I say, if the BCAs did operate to a more standardised system, had a way that integrated how they worked for the same consent application form you filled in one BCA was the same as the other, that would take away a lot of the aims.

JUSTICE COOPER:

It's the outcome you're after?

15 MR BURGHOUT:

It's the outcome we're after and like I say, it doesn't really matter whether there's 68, six or one, it's that certainty and consistency that the industry's after.

There had been some conversations around compulsory peer review. The limited conversations we've had as the CIC has been, but that was done on a risk triage basis and if it helped ensure certainty and consistency, that would be welcomed by industry, in other words if it helped ensure your consent was going to go through the system easier, smarter, faster, then that would be welcomed.

25 Producer statements, the 99 – you've already heard the 91 Act had producer statements within it, the 2004 Act had dropped them but they still pervade the industry.

1526

30 Other mechanisms have ostensibly taken their place so if you add LBP licensing/professional registration and work completion memoranda under the 2004 Act they take their place but BCA still use, producer statements as a risk mitigation tool as you heard. Again, the key issue is certainty and consistency, there is mixed implementation across the 60 plus BCAs. There

has been guidance issues by MBIE but it is still too much variable both in uncertainty and efficiency and in expense. There was meant to be policy work done in 2010 which Mr Hallam was referring to in terms of the work with IPENZ but the was overtaken by the earthquakes response. And so I like I
5 say the industry was talking about how can we provide better guidance on the use of producing statements but that was parked when the earthquake struck and more higher priority things have been worked on.

Building warrants of fitness, they are supported by the CIC. Maintenance is also a key issue that requires improved focus. I think you've heard about the
10 quake star concept which they are a seismicity rating tool might be in the market that can help with that. One extra comment perhaps to add, BRANZ for example has been involved in a lot of, in passive fire research. We did a review three odd years ago where a limited sample of 12 buildings, 11 had breached their passive fire conditions and so the warrants of fitness can look
15 at a number of things we recommended to MBIE at the time that passive fire protection should be added to the building warrant of fitness programme. So like I say as well as seismicity there is a whole bunch of other things that can and should be picked up in the warrant of fitness process.

Innovation, the performance base system should in principle foster
20 encouraging innovation. The leaky building saga back to basics retreat as I call it, was not really the regulatory frameworks fault we should hopefully see some easing of that over time. We do seek some counter risk in the area of product assurance, the predecessor to Mr Nick Hills to, and (inaudible
15:28:11) used to carry around three pieces of copper pipe, one manufactured
25 in New Zealand, one manufactured in India and one manufactured in China. Two along their pipe had manufactured to the relevant New Zealand standard but only one was entitled to claim that and you could not tell the three pipes apart. One would fail within five years, one would fail within 10 and one would last the building code requirement, 50.

30

JUSTICE COOPER:

Which one was that?

MR BURGHOUT:

The New Zealand one luckily, luckily, but you could not –

JUSTICE COOPER:

5 Good answer.

MR BURGHOUT:

10 But you could not tell the three pipes apart and this issue of product assurance, there is no compulsion to have products tested or checked. It is left for each BCA to resolve that to its own satisfaction. MBIE has done some work on a product assurance framework but we see this as possibly a risk area going forward.

15 In the last slide I need to speak to is proactively finding other CTVs as I have suggested. We do support a nationwide programme of properly assessing building risk and three criteria that came to mind were age, design and construction methodology and then having a clear programme of work over a set period to bring sub-code buildings up to that level and then as well as that publically available information as to the status of the building and rather than leaving it unfound as to whether we have more of these or not, we should be
20 proactively going out to sort that. Thank you.

JUSTICE COOPER:

Yes thank you very much.

QUESTIONS FROM COMMISSIONER FENWICK – NIL

25

QUESTIONS FROM COMMISSIONER CARTER – NIL**HEARING ADJOURNS: 3.29 PM**

HEARING RESUMES: 3.46 PM

MR MILLS CALLS

DEREK BRADLEY (AFFIRMED)

5 Q. Your full name is Derek Scott Bradley?

A. It is.

Q. You're a Senior Engineer at Compusoft Engineering Limited?

A. Yes.

10 Q. Because you've been here before I won't go through the rest of your CV. You're going to be presenting the paper that the Commission has received from Dr Barry Davidson?

A. Yes I am.

15 **MR BRADLEY PRESENTS PAPER ON BEHALF OF DR BARRY DAVIDSON**

Unfortunately Dr Davidson can't be with us today. He's indisposed so he's asked me to present his paper which is the Improvement of Building Design through the Modification of the Certification Process and that is
20 ENG.DAV.0001.1.

I'm just going to briefly read out a summary of the key points of that submission and Dr Davidson has made this because he is concerned that the recent earthquakes in Christchurch have highlighted that the buildings with key weaknesses have been and continue to be built and due to the lack of a
25 truly independent checking process many buildings have been poorly designed and constructed.

Under the current review system it appears to Dr Davidson and myself that there is an overreliance on Producer Statements being used as a measure of compliance to the Building Code and that process I'll briefly describe, and I
30 think we've been through it before, but essentially a designer when an application for a building consent goes in a structural designer normally provides copies of the drawings, specifications, calculations and a Producer

Statement stating that the design complies with the Building Code and all applicable structural standards and often, depending on the size of the project, prior to actioning the building consent, the territorial authority or the BCA may check the design documentation themselves, accept the PS1 with
5 no further work, or will actually request an independent design engineer carry out a design review who then, once they're satisfied everything satisfies the Building Code, issue a Producer Statement, a PS2.

Now in a project there may be several Producer Statements issued, both by the designer and the design reviewer particularly if there is a staged consent.

10 Now this is particularly common for stuff like foundations being consented prior to the remaining design being completed. So there may be a number of those and also PS1s can come from the proprietary systems like precast floors or roof trusses and the like. Now with this system and the reliance on the Producer Statements there are a number of flaws as we see it, or as Barry
15 Davidson sees it. Firstly not all designers have equal ability and knowledge.

Now when it comes to accepting Producer Statements a lot of the territorial authorities or BCAs often use CPEng qualification as a measure of someone who is capable of actually reviewing and/or designing a building and often that is actually not the case for some complex buildings. Also in many instances
20 design reviewers are not independent of the designer or their agents despite having the ability to approve or disprove who the design reviewer is, the TAs just rubber stamp a reviewer who is agreeable to the owner or developer and not necessarily the best reviewer for the job. That doesn't happen all the time but I mean we believe it does happen. The decision on who undertakes a
25 review comes down to either who is the cheapest, the fastest and most agreeable, a friend of the designer or the most qualified. Now project managers and developers are more likely to choose the cheapest and fastest candidate who does not ask difficult questions, rather than the most qualified.

In addition, commercial and time pressures may dictate that a review is not as
30 thorough as it should be. Often developers, quantity surveyors or project managers influence who is engaged and what construction techniques are used without having the technical knowledge to make sound engineering decisions. Most often decisions are made in order to obtain the quickest,

cheapest solution which all too often are fundamentally flawed from a seismic perspective. Design and review fees available are not conducive to achieving a robust solution. In addition to this, the insurance industry provides negative incentives to the process as information on sub standard designs or designers is buried under confidentiality agreements so poor designs or design practices are never exposed to the engineering or development community.

5

In addition, engineers can be tempted to rely upon their PI insurance if anything goes wrong so with an insurance safety net a thorough review is not positively encouraged.

10 Dr Davidson then goes through a number of recommendations and procedures to improve the system and the objective of these recommendations is to ensure that design is fundamentally structurally sound at the earlier stage and ensures that a strategic range and a number of buildings are independently reviewed before construction and to ensure that the design reviewers are adequately qualified to perform the design review, to ensure that design reviewers are independent of both the designer and the owner/developer and to promote better designs throughout the country. Now this procedure to achieve this is outlined as following.

15

Now on the application for a resource consent or prior to a building consent where resource consent is not required, the applicant would supply, along with current requirements, the name of the structural engineer, the owner, project management, developer and, with the assistance from the structural engineer, a design features report describing the proposed structural form, proposed load paths, expected seismic performance, and other relevant details to the structure. It is not intended to have details, you know, such as member size at this stage but essentially outlining the structural scheme and the design philosophy. This information would then be entered by the TA into a national database. This information will assist in the decision as to whether a building (a) needs to be reviewed (b) needs to be reviewed by a specialist review team and Dr Davidson has referred to this as a New Zealand Design Review Team. I will discuss the details of that later.

20

25

30

Now the reasons for reviews would tend upon the structural features, the size of the building, the experience of the structural designer, and experience of

the remaining design construction team. On application for a building consent, or possibly at an earlier date, the structural designer would discuss with the BCA the name of the design reviewer but the final choice of reviewer will be determined by the New Zealand Design Review Team articulated through the TA and that would make reference to building information and track records recorded on the national database.

Once that's done a design reviewer would perform the review of the design and issue a PS2 once they are satisfied that everything meets the requirements. If it was not acting as the reviewer, the New Zealand Design Review Team may choose to audit the design following the issue of design review. Now the cost of this review would be paid for by the applicant and would be charged for at an hourly rate.

Now in addition to ensuring critical designs are correctly performed, results of design reviews performed by the New Zealand Design Review Team would be recorded on a national database. Now under this system structural designers would be chosen by owners and developers, project managers and is pretty much as per usual. The decision to the extent of involvement of a design review team and the choice of design reviewer would be made following the review of the profile of the proposed structure, designer, developers, project management team. The approach proposed here would be to ensure all critical life safety structures such as those with large spans or irregular structures are reviewed. They may be reviewed by a New Zealand Design Team or reviewed by a reviewer approved by the New Zealand Design Review Team. This decision would be influenced not only by the uniqueness of the structure but the track record of the designer, owner, developer and builder.

1557

The key to this approach would be that for non-residential structures the designs of first time designers would be reviewed by the New Zealand Design Review Team and it is intended that this nationwide approach with the help of the database would allow trends to be observed and focus the design review effort where it was needed.

In the situation where the DBH elects to have the New Zealand Design Review Team review a design, three members would be chosen for the reason described above. The group of New Zealand Design Review members may elect or request help from other reviewers if they need specialist help and they would be known to each other and may meet in an organised forum to discuss their findings. Now the advantage of this procedure would be that it has incentives to encourage developers and project managers to use designers that cost less for the overall design and design review fee, not just the lowest design and the lowest design review. It encourages and assists designers to improve their abilities. It ensures the designs are independently reviewed by competent reviewers and will provide a national, nationwide description of our building infrastructure.

Now this, this team of New Zealand Design Reviewers. It is envisaged that these will be a relatively small number of designers or experts appointed throughout the country and they will be appointed by the DBH but continue to work for their current organisations. The characteristics of these reviewers would be they would be generally accepted within the engineering industry as being superior designers and leaders in the structural design fraternity. They should be approved by both the DBH and also have input from technical societies such as SESOC. This is to minimise any criticism that could arise from unfavourable reviews that they're involved in. As a group they would encompass most specialities, such as reinforced concrete design and seismic isolation et cetera, and they would be active designers, analysts and researchers in their own right and they or the companies that they work for would not rely solely on design review work to ensure currency. They would work on an hourly rate. The strength of this approach, along with the cost being borne by either the owner/developer is that a designer is chosen who is incompetent and/or provides a poor quality documentation it will cost more to get the design approved than if a more superior designer was chosen in the first instance. Consequently the owner/developer would be wary about re-employing the same designer who would have to improve his ability to ensure his viability.

It is important that they are seconded to a project in groups of three or more. This is to ensure that they act without prejudice on a project, and if they have an adverse recommendation to their, to make, they or their company are not victimised by the developer and/or builder. That essentially summarises Dr Davidson's submission.

QUESTIONS FROM COMMISSIONER CARTER:

Q. Could you repeat what you had in mind, or what Dr Davidson had in mind with respect to the liability of the review team?

10 A. Liability? I think what he wanted was they would be sort of like a, they would review designs at an early stage before they actually got through design and sort of be able to comment whether a structural scheme seems sensible or not, and then recommend whether, or recommend whether a design review that someone's proposed would be suitable, or
15 if the building was actually complex enough, they themselves should actually do the review of that building. I guess it's to ensure, if they're doing a design review the liability would still reside on the design reviewer if they were just acting as an advisory role, but if they were doing it themselves I guess they would have to take some liability.

20

JUSTICE COOPER:

Q. Well if the system was set up that buildings had to be approved by this review group you'd have to address the issue of liability because if these high powered people conducted a review and a building consent was
25 the result there's no reason why they shouldn't be sued if it fell down, along with the primary designer. That's what Commissioner Carter's getting at?

A. No, I understand, yeah, I understand.

QUESTIONS FROM COMMISSIONER CARTER CONTINUES:

Q. There is a possibility, if I could just add to that, that whether they would be indemnified by the actual designer who would still be responsible for carrying the whole project through. I mean the design reviewer is in fact a reviewer but an advisor to the designer if in fact there are aspects of the design that they're not happy with –

5

A. Yes.

Q. – and have to be improved, then it's still incumbent upon the actual designer to accept those recommendations. So look I've just raised it so that it could be kept in the record that there's a matter there that needs to be thought about before you go forward too far in these sorts of matters.

10

A. I agree it is a valid point and I guess the extent of liability would come down to the extent of their involvement in the project, whether it would just be selecting a design reviewer or actually whether they'd be undertaking that review themselves (inaudible 16:02:35)

15

Q. And the other possibility would be that they're actually all the way through this they're working for the building consent authority which then may actually give you a different framework within which responsibilities are described?

20

A. Yes, possibly.

JUSTICE COOPER:

Now we'll have the panel discussion. I think it will be easiest if I just ask you all to make an affirmation.

25

NICK HILL (AFFIRMED)

PETER LAURENSEN (AFFIRMED)

DAVID KELLY (AFFIRMED)

DEREK BRADLEY (AFFIRMED)

30

ADAM THORNTON (AFFIRMED)

GEOFF HALLAM (AFFIRMED)

PIETER BURGHOUT (AFFIRMED)

FRANCIS SULLIVAN (AFFIRMED)

JUSTICE COOPER:

Now I don't think the Royal Commission has many issues that it particularly wants to be discussed in this session but I, there may be value in asking each
5 of you, I think, whether there are matters that you would like to be discussed, so if I can start with you Mr Hill, is there anything you'd like to put on the table in particular?

10 **MR HILL:**

I'd probably like to understand the Ministry's views on consistency of process of moving forward.

JUSTICE COOPER ADDRESSES THE PANEL – USE OF MICROPHONES

15

MR HILL:

Would you like me to repeat that?

JUSTICE COOPER:

20 Yes please.

MR HILL:

Look, I'd be very interested to understand the Ministry's views on consistency of process in terms of the building consent authority's procedures?

25

MR LAURENSEN:

I think, perhaps to add in terms of you also of best practice results that could be done, that sort of is a, it's not just directed at the Ministry it's a sort of all parties to say how do we move forward with best practice?

30 1607

JUSTICE COOPER:

All right, Mr Kelly?

MR KELLY:

I have no additional matters.

5 **JUSTICE COOPER:**

Thank you, Mr Bradley?

10 **MR BRADLEY:**

I guess I have got a couple of comments to make on the issue of producing statements and how and when peer review should be conducted.

JUSTICE COOPER:

15 Mr Thornton, or is it Dr Thornton.

MR THORNTON:

Only Mr I'm afraid. Yes look I am afraid I have got a little list. One of them perhaps is a little discussion on the underlying liability framework if I might
20 describe it that way and in particularly in terms of engineering concept, the relationship between the professional engineer whose opinion is relied upon and in the commercial entity that employs him and effectively insures him which provides the commercial if you like backup to his opinion, and I think it is pretty important we understand that that relationship is integral and much of
25 the regulatory sort of framework only acknowledges the professional side of it, so is that question?

JUSTICE COOPER:

Yes?

30

MR THORNTON:

A little bit perhaps about the question of mandatory peer review and indeed perhaps mandatory use of CPEng for elements of structural design because

that's not the case at the moment. Again I'd like to talk about producer statements, a little bit about the concept of risk base consenting, the question of the national BCA, the natural (inaudible 16:08:44) building consent authority and then maybe if there's time a little bit on the question of the building quake rating, the issue was raised earlier.

10 **JUSTICE COOPER:**

Yes well I know it was raised earlier but we've rather have formed our views on that, the quake rating issue. We are almost at the printers on that subject so...

15 **MR THORNTON:**

I can give you a one liner but that is okay.

JUSTICE COOPER:

Well you can give me a one liner, you can give it to me now.

20

MR THORNTON:

Yeah well that one liner really is that if you want a building rating that you can rely on, so that, you know people can, that maybe insurers will rely on for example, that does imply that you are doing a detailed analysis on every building in the country and that is a massive effort so that is really my one line.

25

JUSTICE COOPER:

Yes it might not be so if you were just restricting it to earthquake prone building potentially.

30

MR THORNTON:

Sure, if you qualify the limit of the building sure that would reduce the effort, but in any event to know the percentage that a building has for example with confidence, that takes a lot of work, that is just a point.

5 **JUSTICE COOPER:**

Yep, thank you. Mr Hallam?

MR HALLAM:

I suppose the only thing I'd like to mention that comes out of all this, is that
10 any changes that may happen as a result of this Commission or generally in
the building sector I think it is very important that they only happen when the
sector is actually ready for it by which I mean that all the appropriate
competencies are there in all the right links of the chain to make sure it works
and at the moment our evidence is that those competencies are not always
15 there to pick up the challenge which has been thrown to them. I can elaborate
on that during the daily session if you wish.

JUSTICE COOPER:

Mr Burghout?

20

MR BURGHOOT:

No I have nothing further to add.

JUSTICE COOPER:

25 Mrs Sullivan?

MRS SULLIVAN:

Thank you, I'd just like to explore a little more, it goes back to a question you
asked earlier about commitment to online consenting and the opportunities
30 that are available within the incorporation of building and housing into the new
Ministry around that. I guess wrapped up in that also is the conversation that
people have been having around a national policy statement or really I think
what they are talking about is the need for more certainty around the

programming and the ability to be sure that these programmes will be continuous.

JUSTICE COOPER:

5 Were you here this morning?

MS SULLIVAN:

I was. I was listening.

10 **JUSTICE COOPER:**

Were you?

MS SULLIVAN:

Yes.

15

JUSTICE COOPER:

And were matters left unresolved from your point of view?

MS SULLIVAN:

20 I felt there was still something of a gap in the conversation. I guess for me I make more of a distinction between technical or operational and governance decisions and you have been talking about policy and regulation I believe?

JUSTICE COOPER:

25 Yes.

MS SULLIVAN:

30 Yes, but I think there are probably opportunities with the inclusion of Building and Housing into the Ministry, I just won't go into that long name, MBIE, which might assist a little in the issue around certainty of continuity of programmes or you could turn that into funding but I think it is really about, this is the direction we are heading in and everyone can get on that particular boat and paddle in the same direction and it is an issue for local government in terms of

certainty for BCAs around investment decisions, about you know, will they go to online consenting as an example, so I think there is probably a little bit of room for exploring that issue.

5 **JUSTICE COOPER:**

So if I am understanding you, you heard what was being talked about, about the Ministry going through some public process once its developed its work programme, or telling people what its work programme is for several years ahead, you are seeking some reassurance that that may include progressing
10 the issue of online consenting, is that –

MS SULLIVAN:

As an example and I mean it really came up in relation to what you do in terms of specifications for building requirements I am quite carefully not using
15 the word standards, it came up in a number of ways and I guess for me it is a little bit of a reality check against governance decision making, you know government decision making and the ability to operationalise some of these things that we probably know really need to happen.

20 **JUSTICE COOPER:**

Well Mr Kelly can you respond to that?

MR KELLY:

I guess at two levels, yes I think it is related to the forward work programme
25 and commitment as to what the Ministry is working on. I think in the specific instance in terms of commitment to an online consenting technology the Minister has expressed his keen interest to progress this and we are doing some work but it will, like all capital projects of this sort, need to have a detailed business plan to be approved including various funding options. So
30 to the extent that we can commit there's still quite a detailed case to be worked up.

JUSTICE COOPER:

You, as I understood it from earlier in the day though, were generally cognisant of the benefits of a work programme which advised the relevant interest groups in the sector what it is you intend to do to prioritise?

5 **MR KELLY:**

Yes and more broadly I think what Francis Sullivan is raising is not just in the area of standards but a broader work programme and what we have done in the past is tried to be quite open about the broader work programme around the Building Act Review and the subsequent reform programme which is on a number of fronts, very happy to publish that.

JUSTICE COOPER:

Yes does that help you?

15 **MS SULLIVAN:**

Yes it does and from a local authority perspective we are aware that Building and Housing previously the Department had initiated a programme where there were a number of changes they were looking to implement and for a number of reasons, sadly the Canterbury earthquake is being one, you know, these things have struggled a little bit over the last few years but really if we are looking to resolve some of the issues that are being discussed today that I've heard this is definitely what we need. We need some certainty around an ongoing programme ,and local authorities unusually look to the central agencies for a lot of direction in this particular area of regulation sensibly so really we need some more certainty around who is going to be doing what and when.

JUSTICE COOPER:

All right well it seems to me that Mr Kelly seems to be open to that approach, all right.

1617

MR LAURENSEN:

Sir could I just perhaps – from another (overtalking 16:17:05) as well.

JUSTICE COOPER:

5 Certainly Mr Laurenson.

MR LAURENSEN:

10 Is just to – probably the perspective that we would have is that in terms of setting these policies, Sir it's very important in getting to the design community in terms of whether it's an online consenting system, but even working from the current system, getting to a point where we will just remove some of the uncertainty or some of the inconsistency that does happen and so I think that's what Frances is referring to is some of that detail needs to happen right at the practitioners end and be built up and through to the mechanics, 15 whatever system delivers that and I think that's what's been signalled from the Ministry, intention to work down that track which would be very good.

JUSTICE COOPER:

20 Mr Thornton you raised this issue of risk based consenting, what were you wanting to say about that?

MR THORNTON:

25 Well I think I mean that the words been used quite a lot, and I'm not sure that across the industry that we all – sorry that we all take it to mean the same –

JUSTICE COOPER:

What you understand by the term.

MR THORNTON:

30 Well I think from a practitioner point of view and probably from the local authority, the BCAs and all practitioners would say that it's about – that the amount of checking or like of reviewing that goes into a consent is relative to the complexity and the risks associated with the project. Similar things to what

was just – Derek was just saying before so that the buildings, the project is evaluated for its risk at its complexity and procedures are then appropriate to that. I'm not quite sure that's what the MBIE considers it as, where – I think if I could just divert for a moment I think we've been subject to if you like
5 regulatory reform since 2004 and it's been an ongoing process, interrupted by the Canterbury earthquakes but it was ongoing in anyway, and I think everyone would freely admit that quite a lot of the driver for that is to try and remove liability from the BCAs. This of course came from the weather tightness issues and perhaps unfortunately that mindset affects everybody's
10 position and a whole lot of issues whereas I would say in and certainly we would expect from the national regulator that the primary objective is safe buildings, safe and reliable buildings rather than a liability issue and I think perhaps that's an issue. Certainly we have a perception that that's been driving regulatory reform rather than the issue of safe buildings at the end of
15 the day.

JUSTICE COOPER:

Mr Kelly.

20 **MR KELLY:**

I'm happy to respond. I don't agree that the reform programme is driven by trying to remove liability from the consent authorities. It is very much driven by trying to get well built, safe buildings. The issue around the liability of consent authorities is that that drives certain behaviours and what I've
25 presented here yesterday and previously is that it's led to risk averse approach by consent authorities who are concerned about their liability. The changes to legislation are intended to be very clear about the accountabilities for designers, for builders and other players in the system including the consent authorities. So it is about trying to get the best results for owners of
30 buildings.

JUSTICE COOPER:

Did those legislative changes designed to alter a current incidence of liability or merely to clarify it.

MR KELLY:

5 To clarify. There were implied accountabilities but they were not as explicit as was considered necessary and that was the feedback we had from consultation.

JUSTICE COOPER:

10 Well I'm not sure if that answers your or meets your concern, I suppose it does in a way.

MR THORNTON:

15 Well I think there's a view, wider view that that's perhaps not really the case.

JUSTICE COOPER:

The objective.

20 **MR THORNTON:**

If you like. But certainly I mean, we can see it in some of the forms of consenting that have been promoted. The – it is very much removing almost by statute any checking by the building consent authority. Sure they review a process if you like that proper processes have been formed but that there is
25 no if you like peer review function within the building consent authority. One of the issues you know, there's the deep pocket syndrome that has been suffered by local authorities and if when you're considering about protection for the consumer if you like, or for the building owner, removing the building consent authority as the last man standing, doesn't – has not actually
30 improved the consumer's protection at the end of the day, particularly if the other man, other people standing, other designers and the builders are – don't have a deep pocket if you get my meaning.

JUSTICE COOPER:

(overtalking 16:22:50).

MR KELLY:

5 I guess there's a lot of things that come into that. The whole liability regime is
before the Law Commission at the moment examining a number of these
issues. I think though that there is a couple of relevant issues but some of the
discussion over the last two days has been around commercial consenting
and the Courts have held that the consent authorities do not have the same
10 duty of care in that situation as they do in the residential situation. So in terms
of the changes we've been talking about and considering in the commercial
area, it's not driven by that issue. That issue does pertain still though in the
residential area and what we've been thinking about there, again it's not
driven by removing a Council liability per se, but thinking about how do we
15 differentiate between reasonably standard simple houses that have – that are
easy to categorise in terms of low risk, low weather tight risk, they might
conform to NZS3604 and, and who are the builders, what's their track record
and what do they have in place in terms of consumer protection versus those
truly one-off houses innovative and have a high risk where the checks and
20 balances need to remain as they are, whereas some of these others, if there
are other measures in place can we move to another regime that incentivises
a different practice and investment in their systems. That's – so we
differentiate between where the liability has been found to lie in that sense.

25 JUSTICE COOPER:

Well I suppose our focus as a Commission is really – is really on the
commercial sector in the main because that's where issues concerning the
structural integrity of buildings tended to be focused as a consequence of the
earthquake, but this – you've raised an issue which is probably related about
30 relationship between the professional engineer and the employer and the
employer's insurer as I understood it. What was the point you were wanting to
make there?

MR THORNTON:

Well it is, I guess it's related – a related issue but I think a lot of the regulation is very much directed at the professional if you like, the chartered professional engineer, the registered architect, a builder, a licensed building practitioner
5 and that's all good but I think the legislation needs to acknowledge the position of if you like the consulting firm that, the architectural firm, the building company because – you know part of the reason, part of the regulatory reform that we're already going through is about identifying the designers and the building practitioners who are involved in a project. Now that's partly to
10 ensure that you've got the appropriate people doing the work, that are appropriately qualified, but at the end of the day it is also to give some commercial assurance of when something does go wrong that there is some form of redress available perhaps without having to rely on the BCA's deep pocket. Now my – our point is that when you're considering the involvement
15 of professionals that the regulation needs to acknowledge the firms, the commercial entities, the people who have the contracts with the clients as well, it's very important that that is done and that's a missing link in a lot of the regulatory stuff that we see to date.

20 1627

JUSTICE COOPER:

I'm not sure if I really understand that point but is there anyone else who wants to comment on it? Mr Hill.

25

MR HILL:

If I understand what Mr Thornton was commenting on, I assume that you're looking for an acknowledgement of an entity as a whole in terms of the liability and risk component. Is that right?

30

MR THORNTON:

Yes if you like, yes.

MR HILL:

So rather than have the focus on the individual which is what I think you said, there should be some accommodation for the organisations and its collective responsibility.

5

MR THORNTON:

Yes and perhaps this moves on to the debate on the Producer Statement and the alternative form. I might say that Mr Kelly this morning seemed more accepting of the need and usefulness of Producer Statements but the paper he presented actually suggested that MBIE saw no need for Producer Statements. The alternative form of Certificate of Work that has been produced by regulation has no reference of the commercial entity. It only is the individual and I think that's no good for the individual and it's also no good for the consumer at the end of the day or the client, the consumer, because it doesn't link the, if you like, the commercial entity to the professional and that's the important point: linking the professional to a commercial entity.

10
15**JUSTICE COOPER:**

So if I'm following you, it would be Dunning Thornton's standing in. Is that your firm's name?

20

MR THORNTON:

It is.

JUSTICE COOPER:

Dunning Thornton would be the party certifying and the party then sued rather than Adam Thornton himself. Is that the point you're making?

25

MR THORNTON:

It's both. In fact the current Producer Statement regime which is used by almost all engineers and by few architects it's a standard IPENZ, ACENZ, NZIA form. It has exactly that wording. It identifies a professional and their qualifications on behalf of the, if you like, the commercial entity.

30

JUSTICE COOPER:

Well if a firm is instructed, generally speaking the firm will be liable in the law to the client for any negligent act. A certificate given to a third party is not part
5 of that contract but would normally be given, well the person liable would be the person giving it so if it was both the firm and the individual engineer they would both be potentially liable to the person who it was given to to be relied on.

10 MR THORNTON:

Yeah I guess that's true for the contracted party but in tort it may be the BCA or some subsequent owner if you like so that's part of the issue because the form of record can be the Producer Statement or the Certificate of Work which lies within the BCAs files.

15

MR LAURENSEN:

My view on that is there's two processes going here and one is and there's a body of work that's not completed in terms of the Amendment No. 4 before Parliament and I think in terms of looking across individual responsibility for
20 work both in the Licensed Building Practitioners' Scheme that I think the Producer Statement, the view from a BCA, is that that is an affirmation of the design that the plans and the specifications that come forward and I think the bit that's still to come is in terms of mandatory contracts for work over \$20,000 which deals I believe with that other issue of the contracted parties over and
25 above, certainly as Mr Hallam talked about this morning the requirement for BCAs and for individuals and BCAs to record reasons for decisions that's well set in place now, so I would view that as just being that step for that purpose in relation to a Producer Statement or some other sort of certification and then having this other suite of contracts coming along. The issue about
30 proportional liability versus joint and several I understand is before the Law Commission specifically to do with the building sector and speaking as a BCA, the BCA don't have long pockets because in actual fact at the end of the day a BCA or territorial authority is an amalgam of all their constituents.

JUSTICE COOPER:

That's what makes their pockets big though.

5 MR LAURENSEN:

Yes, not all pockets deep.

JUSTICE COOPER:

Well maybe not all their pockets. I mean whilst it's a very difficult issue and
10 we're certainly not going to solve in this Royal Commission but it is a difficult
issue and there is all sort of people who would rather not be liable but you
have to consider the position of plaintiffs as well who are not in the system for
the fun of it but because they've suffered some loss and if it's in relation to a
house, it is likely to be their biggest investment in this country.

15

COMMISSIONER CARTER:

So the relevance to the Royal Commission in this matter is to see that the
prescriptions that are developed within the Ministry don't, through ignoring
matters of how the liability might fall, actually don't get the desired input from
20 the people with the right levels of competence that they're seeking. We're
dealing with the levels of competence that are required to get the standards
right and so we must actually, it must be thought through how you best
achieve that. Because that's rather a different matter to the questions of
sharing liability amongst people who are involved and things like that which
25 gets outside our purview so there is some relevance in what we're talking
about inasmuch as it might alter the quality of design that you want to develop
into the system.

JUSTICE COOPER:

30 Can we just move on briefly to Producer Statements and their use. I think you
had a point that you wanted to make about that Mr Bradley.

MR BRADLEY:

We believe that there is the need for some sort of design constructional review certification whether it be a Producer Statement or another form but more concerning to us would be there needs to be some sort of an auditing of the system and that not being a procedural audit but an actual technical one

5 because our concern is we actually do see the buddy system in action and the concerns are it's a closed system if the territorial authorities or the BCAs accept documentation to say that this design complies from a closed loop there could be that situation where the designs and the reviews are being done adequately and no-one ever gets to see that so our concern is whatever

10 gets put in place needs to have some sort of an auditing system.

MR THORNTON:

I agree and disagree. The question of a buddy system I have to say I've never seen that and I know that our own practice and what is wide practice in

15 Wellington is that peer reviewers are always chosen in consultation with the local authority so perhaps you'd offer them a selection of a number of people who we think are appropriate.

JUSTICE COOPER:

20 That would tend to be the same people on every occasion wouldn't it?

MR THORNTON:

Well it tends to be more complex work and I think you have to say New Zealand is a small market. There aren't that many number of firms who

25 are capable of doing or reviewing.

JUSTICE COOPER:

This discussion really is about more complex work I think however that's defined.

30

MR THORNTON:

Yeah, but look I very much agree with Derek's point about the audit and I think you know we've been banging the drum for a long time that a lot of the BCA

review and some of the checking perhaps that is done by IANZ is about process not of substance and for any reliance on Producer Statement type system there must be some element at least of random review at some stage during the process. Now that can be a selective random so that, you know, items, issues that are, perhaps buildings that are important or are very complex they are of this candidate suite but even the most basic ones should. Designers should feel that their work is going to be subject to review, be it every so often.

10 1637

JUSTICE COOPER:

Mr Hallam.

15 **MR HALLAM:**

Without something defensive about that I don't think it's true that we have the accreditation process doesn't go into substance. As I explained in my earlier presentation the technical experts do indeed review individual files during the whole process and they do look at the technical outcomes and they are peers of these people so I think although we're not doing a design review, that's not the purpose of what we do, but we do look at that and we do look at the way that the BCA themselves organise that for whatever type of building it may be. So we're looking at whether or not they in our technical people's opinion are engaging or agreeing to engage, to the engagement of appropriate engineers or specialists in a particular area, I think that generally seems to work. I mean always you can point to individual cases where something may have gone wrong but generally I think the process is now in place where appropriate people are chosen to do peer reviews.

30 **JUSTICE COOPER:**

The kind of review that's been spoken of here though as I understand it is something that might take days, isn't that right?

MR HALLAM:

Potentially.

JUSTICE COOPER:

5 Or months did you say?

MR THORNTON:

Yeah. I think that that, I mean I took, my topic was if you like the question of mandatory peer review and various people have said everything almost but
10 that, that there a certain complexity really demands that a peer review is undertaken. Now if that is the case it's accepted by designers, accepted, it's accepted by BCAs then surely it's appropriate to actually recognise that in a recommendation and perhaps legislation. I mean I think, and my by-line was also about you know the use of CPEng. I mean in the past there have been
15 draft elements, there's been drafts of regulation which have sort of suggested that you know design of any – design and peer review of any IL3 or any IL4 building should be undertaken by a CPEng. Now no one would expect any different that a non-qualified engineer would do that sort of work but it always tends to get a bit knocked back by if you like a political level because it's says
20 batch protection but I mean, in my mind Sir it's much better to say, well look, this is what is expected, this is the requirement that certain work will be done by chartered professional engineers. At the moment there's no – anybody can go and do the structural design on a building, they don't have to be qualified even, but that's not to say that it happens but that's the law, but as I
25 say, you can apply the same argument to peer review so, and I think everybody said the same thing but not quite in those words. When work is particularly complex or of high value to the community, then it should be a requirement that a peer review is undertaken.

30 **JUSTICE COOPER:**

Mr Hallam you want to comment again?

MR HALLAM:

Just to say that there is a precedent here, in other work that we do in the mechanical engineering area for particularly the – for a high risk level of equipment like pressure equipment for instance there is a mandatory peer review by an independent CPEng engineer and in fact IPENZ has a specific
5 sort of sub-register for peer reviewers or design verifiers they're called in engineering so there is a precedent for that sort of thing based on not the complexity particularly but on the risk level and so that same sort of model could be applied here as I see it.

10

JUSTICE COOPER:

Mr Kelly, it's not a feature of the current system because it hasn't really descended into that sort of detail has it, except in relation to the special
15 provisions for dams.

MR KELLY:

No that's correct. I think what we look at is also the practice and in terms of complex structural buildings they are designed by chartered professional
20 engineers and the people who are commissioning that work are also looking at who they're commissioning to do the work. You know it always seems a matter of logic in a sense that they're not going to employ someone who doesn't know how to design the building so there is a question as Mr Thornton's raised about how much do we need to put in legislation to say
25 that you must versus what's going to happen anyway through an all market practice. The other part of that though is that we have supported greater disclosure in terms of when someone is a chartered professional engineer what is their area of practice or expertise and those are useful discussions that we're having with IPENZ now is to what is actually useful, so that's a
30 piece of work that we're doing right now and I think we're getting a lot closer to agreement about what's useful for people to make decisions.

JUSTICE COOPER:

On this question of another layer for buildings of particular complexity, one of the many things I've learnt today is that you've defined complexity Mr Kelly in six levels in a document that was written by the Department of Building and Housing. Should I have known about that – have you told us about that about
5 before?

MR KELLY:

No I haven't, it's not something that I'm particularly familiar with to be honest.

10 **JUSTICE COOPER:**

Might be very interesting for us to see quickly.

MR KELLY:

Certainly, yep we'll –

15

JUSTICE COOPER:

Because I think it's certainly in the back of my mind anyway that there may be some special provisions that are warranted for buildings of particular complexity and being a lay person in these matters I've wondered how you'd
20 go about defining it. That document you don't – you can't really tell us much about it?

MR KELLY:

No it's not something that I'm familiar with but we could get a copy to you.

25

JUSTICE COOPER:

That'd be appreciated. Mr Laurenson?

MR LAURENSON:

30 It is part our daily life in terms of BCA.

JUSTICE COOPER:

It's a good thing we asked you along.

MR LAURENSEN:

In terms of both for the assessment of individuals but also for the recent work that's happened in terms of restricted building work and there is actually some
5 design licences that are equally 1, 2 and 3 as a complexity level, so for most BCAs I think Mr Hallam would agree would have that complexity level on their websites and on their information handed out to designers and owners.

JUSTICE COOPER:

10 Is that the same document that Mr Hallam was talking about though, is that based on the same document?

MR LAURENSEN:

R one to three and C one to three yes I would estimate there would be in the
15 order of 70, 80 percent of New Zealand BCAs that we use in that national competency model.

JUSTICE COOPER:

I thought –
20

MR LAURENSEN:

And most of the others are still working towards changing from their existing system to that model, yes.

JUSTICE COOPER:

25 I see, I thought you were describing a six tier system.

MR HALLAM:

Okay, it is six tiers but it's residential 1, 2 and 3 and commercial 1, 2 and 3 so
30 there are six categories.

JUSTICE COOPER:

I see, so what are the characteristics of commercial C3.

MR HALLAM:

I'm not a technical expert in that area. I mean I have seen it but I'd rather not quote it because I will probably get it wrong.

5

(overtalking 16:44:49)

MR HALLAM:

10 It does indicate that it is a commercial building, it has a reasonably high risk and lots of technical things in there which are only – you only need to know about if you're doing that level of building because lower levels, even in the commercial area have different rules around meeting the building code and the Building Act.

15 **JUSTICE COOPER:**

Is this document something that was produced for the guidance of BCAs?

MR HALLAM:

20 Yes, it's a document which was produced mainly because during the early phases of the accreditation process it became clear that BCAs generally were not familiar with the idea of doing competence assessments and lots of people produced systems which were less than optimal shall we say, they were produced as a result of trying to comply with the regulations and then further in assessments we'd find that they really didn't do the job and so the
25 department did some work to try and define what they saw as an ideal system. It is fairly complex but it does do the job but certainly in terms of classifying buildings which it has to do in order to classify competencies, it is a viable way of doing things. That could however be what we might call very complex buildings, the Sky Towers of the world which may even fit outside of
30 that. The sort of exceptional buildings. It would certainly cover all complex buildings which are sort of normalish like high rise, you know, ordinary high rise buildings.

MR LAURENSEN:

The difference between the levels effectively takes into account things such as the height of the building, number of occupants and the type of use of the building whether it's got any special care requirements for the users of the building so that is described between those three competencies.

JUSTICE COOPER:

It's pretty broad brush is it?

10

MR LAURENSEN:

It, sometimes it's a challenge between one or two of the categories but there is three definitive within, although there is a certain element of very specific design at the very top end of the competency measure.

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Perhaps just one thing to perhaps clarify in terms of the discussion earlier about producer statements and the register, registers of such. In terms of from a specific area of fire design there has been, today and someone follows an acceptable solution to the building code that can be assessed by the building consent authority because we have a measure against it. If something in terms of the fire design steps outside those boundaries, there's been a design review unit with some independent specialist people from New Zealand Fire Service that assess that and it's got, it's quite akin to the, what Mr Bradley was talking about earlier on, so it just may be that there's actually a need to have a discussion about what levels are from other engineering practices or other professions need to have a, some sort of scale within their, where it goes to a body or a group of expertise. So there are some elements of that within the current system that we do work with on a daily basis. And another one would be accessibility of people with disabilities into buildings that's a level you can follow and then past that is a very specific design to be aided. It is a small community in New Zealand in terms of the expertise and I would certainly say over the last few years, and this is where

accreditation has helped processes for councils to record the reasons that we make a decision, to require information to be provided at the consent lodgement stage, such as a design brief for engineering, to an extent that certainly wasn't there more than five or six years ago.

5

COMMISSIONER CARTER:

I want just to ask Mr Kelly, are you familiar with the process that John Scarry talked about yesterday, the James Reason model for putting barriers in front of risk, because what we've sort of talked a lot about the need for communication here and part of the challenge for us, and particularly for yourselves is to describe in a way that makes it easy for people to follow what it is that you're setting out to achieve. And the James Reason model sets up the importance of barriers to actually intercept the possibility of something, a mistake going undetected, and I think it fits nicely with the complexity discussion you're having because the more complex and difficult something is, the more barriers you need to have in place to check that something hasn't slipped through, and it's a nice means of communicating because the model is very graphic and it enables people to understand quickly what it is that you're trying to achieve. So I might suggest that you have a look at that model and see if it, and even using it by name because it's now getting pretty widely known around the risk world, and it's easy for the public to appreciate why it is that certain processes that are put in place to deal with more difficult decisions.

25

MR KELLY:

I wasn't here for that part of the discussion but we are, we will follow up on that, yes, very much.

JUSTICE COOPER:

30 Now you all heard Mr Bradley outline a proposal which is also in relation to complex structures I infer. Did you have any definition in mind of what structures that might apply to?

MR KELLY:

Well we thought about this and in the context of a commercial structure we believe that all structures require some level of peer review and it just comes down to the importance level of that structure to the extent of the review that it gets.

JUSTICE COOPER:

Now are you talking about importance level in terms of this 1170 or you're not using that in the technical sense?

MR KELLY:

Yeah, well the 1170, there's a table, table 3.2, that sort of provides a nice starting point I believe, if that was to be the basis for indicating what level of review needs to be done, it probably needs a bit of review and perhaps another one or two importance levels needs to be put in there just so, just for that purpose but, I mean that could be, provide a good basis for doing that, for instance if it was an importance level 1 it might just be simply something like looking at a design features report would be all the review that needs to be done. And if it's an importance level 4 or something it could be a full independent analysis in design, and somewhere in between for the remaining, and that's what we, where we're coming from.

JUSTICE COOPER:

Having heard the proposal outlined, and I know it may be difficult if you're hearing it for the first time but are there any comments that people would like to make about Dr Davidson's suggestion as presented by Mr Bradley?

MR THORNTON:

A couple of issues Your Honour. A number (inaudible 16:52:37) talked about the need for some sort of national BCA, particularly in a structural sense and that's a sort of similar thing to what Derek's talking about in some respects, but in terms of selecting what sort of, you know, what structures require peer

review, I mean again others have referred to some sort of risk matrix thing, a bit as we have the ACENZ, IPENZ construction monitoring matrix which determines the level of construction monitoring undertaken by the designer which, so that the factors are, I mean in construction monitoring it's the size and complexity and of course the experience of the builder, but for design, for design peer review it would be importance level. It would be complexity of the structure, and it would be the experience of the designer and perhaps the magnitude of the project. So from that, you know, you can have a matrix and then a series of outcomes which as Derek said at one level is a simple structure, as a quick review of the design features report, and at the top level, you know, base-isolated nuclear power station it's a three parallel designs undertaken by different, you know, so there's a continuum from one, one extreme to the other.

15 **COMMISSIONER FENWICK:**

Is it adequate just to concentrate on those important structures? If the objective is to improve the standard of design should be also be looking at the two, three storey smaller buildings which perhaps aren't important. Perhaps are easily audited but I sort of feel aren't we missing something if we exclude that completely and people who are designing those know that those designs will not be audited, and therefore they are a bit freer to do what they want without the need for understanding the quality. I'm just wondering, you know, whether you're missing that out and this perhaps feeds from that level, feeds on up?

25

MR THORNTON:

Look I totally agree with you and I think I made the comment before that there needs to be and always need to be a random element, random selection element so that even the most simple designs do get selected for more rigorous checks, so that every designer –

30

JUSTICE COOPER:

Just a random audit process?

MR THORNTON:

Yeah a random audit process so that every designer understands that his work may be subject to scrutiny at any time.

5

MR HALLAM:

Just really to say that for those lower risk, lower complexity buildings, isn't that what the BCAs do now, is that they review the whole design against the code? If they're not particularly complex buildings then I would've thought the existing system, remembering that the failures that we've been talking about in the Commission were not things done under the current now, the current framework. My belief is that for the buildings which are not particularly complex, that the system that's in place now actually does that. If it's removed from the BCAs' area then that, I would see, as a concern.

10
15**JUSTICE COOPER:**

You're saying that the accreditation process has in fact gone some way to giving the assurance that you might otherwise be looking to an audit process for?

20

MR HALLAM:

Indeed because we now know that buildings are being, designs are being reviewed by people with the appropriate competencies within the BCA but they also, they now recognise through the systems that are set up, when they know what their competencies are and they know what their limits of competency are and as such they, by default, send it out to somebody else who does have those competencies if they can't do it.

25

MR LAURENSEN:

If I could make a comment in relation to that in terms of so you're talking about the less complex work and perhaps some of the residential 2 and the commercial 1 and 2 sort of level and certainly I can speak on behalf of our BCA and in fact our wider cluster is that we, on an internal audit sort of basis.

30

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We very recently put the same designs through our whole team and compared the questions and answers that come out of that and further than that have actually sent electronic copies to other BCAs. Now that is still within
5 the BCA framework, but it gives a very good feedback loop in terms of the things that people are looking at in different locations and from a building officials institute perspective we then feed that through into the training programmes for building officials so I think the fact of the level and the standard of documentation that is being issued with consents around the
10 country has got to a pretty appropriate point. In fact the criticism could be that, in fact Pieter might share this, is that in some cases it has moved from this sort of size to too thick in terms of an on the site series of specifications and standards so there is an element of internal peer review that does happen within the industry that certainly wasn't there. It is also manifested by the
15 comments this morning about actually doing physical work for other local authorities, other BCAs. So that is happening in pockets right around the country and hence our feeling that a national standardised system will only aid that process of evaluation.

20 **JUSTICE COOPER:**

Is that the point you wanted to bring up under consistency of process?

MR LAURENSEN:

Yes, that very much is, yes.

25

COMMISSIONER CARTER:

I am just commenting on what we heard yesterday about some very simple buildings that were severely damaged just recently as the last, in the 18 months or so, that presumably had gone through a BCA checking process so
30 to me what I heard yesterday where there are aspects of an earthquake that tests a building in a way that design authorities haven't really yet familiarised themselves with and so there is still the case for checking for simple buildings, adequacy under earthquake so wouldn't –

JUSTICE COOPER:

Yes these were new buildings Mr Hallam that were either constructed or in the course of construction when – and didn't effectively, didn't survive the June
5 last year earthquake or the December earthquake last year?

MR HALLAM:

Are these the ones that –

10 **JUSTICE COOPER:**

Mr Scarry was referring to.

MR HALLAM:

I don't know the details of those buildings but I would suggest because, partly
15 because the Commission hasn't finished its work yet, that probably they were built without the wisdom that may come out of this Commission.

JUSTICE COOPER:

Well that's true.

20

MR HALLAM:

And therefore they've continued what might – with the benefit of hindsight be seen to be mistakes of the past but having said that with my geological background the conditions that pertained here during the major earthquake
25 were somewhat exceptional for an urban area.

JUSTICE COOPER:

That's understood but what Mr Scarry was drawing to our attention, were the buildings that were built subsequently and were still –

30

MR HALLAM:

And if they are still built to the same design code which is already proven not to be adequate it is not surprising that they would fail –

JUSTICE COOPER:

Well yes and no because they should have been built with new Z factor.

5 COMMISSIONER CARTER:

There was another factor in there though and that these were not buildings that were, suffered during the 22nd of February event, they suffered through the –

10 JUSTICE COOPER:

They didn't exist then, they didn't exist as I understand it.

COMMISSIONER CARTER:

No they suffered under much less severe earthquake causes than that so
15 there's still a question there, yet to be answered and I just refer to it because it was an earthquake induced situation that we are all still learning from I think?

MR HALLAM:

I think that – if I may, I think that does though relate to this question about
20 building warrants of fitness for deterioration that almost inevitably the fact that the building is still standing and looks okay after how many earthquakes we have been now, so next to the thousands, we don't know to what extent a building is suffering small scale failures in the structure which may then be catastrophic in a small quake after that not because there was a basic design
25 fault but because there'd be, they had suffered ongoing incremental damage.

JUSTICE COOPER:

That is a very controversial subject.

30 MR HALLAM:

Okay, I am not claiming to be a technical expert on this.

COMMISSIONER FENWICK:

In the case that was being quoted by Commissioner Carter though, the February earthquake severely damaged the building which was then demolished and a new one was built and then in the June earthquake that building was very seriously damaged and at the point of collapse so it was not
5 damaged by significant previous earthquakes.

MR HALLAM:

I take that point.

10 **JUSTICE COOPER:**

Mr Bradley you were looking as if you wanted to say something?

MR BRADLEY:

My only comment would be, I would be surprised if the design codes that were
15 used to design these buildings subsequent to February were found to be sufficiently deficient that would have caused that. I believe that they would have been fine for that purpose, particularly for that level of shaking.

JUSTICE COOPER:

20 So you are not inclined to blame the code?

MR BRADLEY:

No.

25 **JUSTICE COOPER:**

Mr Hill, I think we've discussed most matters that people raised for discussion, other than the one that you raised about best practice. What would you like to tell us about that or what would you like to see discussed?

30 **MR HILL:**

Well I guess it links to consistency and I think there's an opportunity for the BCA environment and for the Ministry to work together to produce best practice across a lot of, or the areas of application within the BCA

environment and I think that you can bring productivity gains into that area as well.

JUSTICE COOPER:

5 Are you talking about summaries of best practice?

MR HILL:

Summaries, yes.

10 **JUSTICE COOPER:**

So that there's a – people can read about it?

MR HILL:

Absolutely yep.

15

JUSTICE COOPER:

All right, yes Mr Thornton?

MR THORNTON:

20 I would just like to come back to this issue, I think you asked this question and we didn't really respond to it which is about you know, a national BCA. I mean I would make the comment that in terms of checking of what BCA has done, to do structural work, if you put aside what is covered under 3604 effectively acceptable solutions design code, if you put that aside I am not aware of any
25 BCA that is carrying out structural checks of buildings that are designed to BM1 for example in house. Most of them of course, will have taken, using external expertise. So that does raise the question particularly as the buildings get more complex, why not have a – like one BCA that covers, a national BCA if you like that covers particularly complex buildings and before I
30 came here today I was thinking that that you know could cover all aspects of the consent but I mean it raises in my – what I have heard today and just reflecting on it BCAs they will all admit that they don't have structural expertise in house but they have a lot, or have gained a lot of experience in other areas

and particularly in the E2 area the weather tightness and things like insulation and those, they have developed a lot of in house skill to do that so it is perhaps a shame to lose that but it certainly from, our profession would say it would be of great value to have one central BCA that handles complex structural work and that could perhaps perform some of the function of what
5 Derek is suggesting, could be a body, perhaps I don't believe that they should do the peer reviews but they could be effectively verifying who is appropriate qualified to undertake peer reviews and I would give efficiency not only for – well I think for the whole industry to have such a body. It also, if you like,
10 gives a career path for those people employed in that organisations because you could have effectively a design team of senior engineers and junior things so people can work up which is really a reason why local authorities, BCAs don't have engineering teams whereas they did, 20, 30 years ago, they had quite large teams. So that's I guess an issue that a number of people have
15 raised over the last couple of days, the question of whether you have two or three or maybe one dedicated BCA particularly in the structural area would be a strong key recommendation.

JUSTICE COOPER:

20 All right, thank you. Yes?

MR HILL:

I think we'd be open to that discussion.

25 **JUSTICE COOPER:**

Okay, well we are just going to adjourn briefly now and the panellists are excused thank you and when we come back we will be in our normal format.

PANELISTS EXCUSED

30 **HEARING ADJOURNS: 5.06 PM**

HEARING RESUMES: 5.09 PM**JUSTICE COOPER:**

This is the last hearing of the Royal Commission enquiry and a process which
5 began in so far as hearings are concerned last October is now at an end.
We've got a lot of work to do before handing in our final report but at this
juncture I'd just like to thank all of the people who have given evidence before
us and also and in particular those who've helped the hearing process to run
smoothly. We've had assistance everyday from the people at the back of the
10 room for which thank you, enabling proceedings to be recorded and beamed
out around the world. Our proceedings have been able to be watched live.
They're also archived and so I don't think there's ever been a more accessible
Royal Commission process.

I'd like to thank Polly Leeming for the work that she has done in dragging up
15 hundreds of documents over the period, and her predecessor Katie Laidlaw
who was in that role for the first part of our hearings.

I'd like to thank all of the Commission staff who have contributed to what has
been from the hearing point of view a very smooth process. A lot of things
have had to be organised and from our point of view it has run very smoothly
20 and it's a tribute to all the hard work that has been put into it.

I'd like to pay publicly also a tribute to the hard work of counsel assisting the
Commission. Mr Mills your own efforts but also those of Mr Zarifeh and Mr
Elliott are most appreciated and you have been assiduous and astute to
ensure that relevant evidence has been brought before the Commission and
25 that of course is the prime role of counsel assisting and I know that at times
this has been a very burdensome task carried out efficiently and without
complaint in circumstances which sometimes have been demanding. So I just
wanted to acknowledge that, and thank you for it.

And Ms Walton, to you too. You will not have to swear in any more witnesses
30 in this process. You know you have become very skilful at it through such a
long period of practice but also you have been a very friendly face for us in the
interaction with all the witnesses with whom we've had to deal and in
welcoming here those who have wanted to attend our proceedings to see, to

try to understand in many cases why they've been dealing with tragedy and bereavement. So thank you for the contribution that you have made to that. So with those few words we will now retire.

5 HEARING ADJOURNS: 5.14 PM