

Business Session

- C: chair, Roger Flanagan, University of Reading
R: presenter, Richard Baldwin, Derwent London
J: presenter, Jim Saker, Loughborough University
Q: question from the audience
A: Alistair Gibb, Loughborough University

C: I am Roger Flanagan, University of Reading. We're going to look this afternoon at the whole question of business profitability. My background is with construction companies. I served on the board for [unclear] and various other companies, so I split my time between academia and business but what we're going to talk about today is the importance of this [unclear] ability and I think I'd just like to say a few words which I think people do lose perspective on.

Yes, the business is tough; yes, the business is changing; yes, we've got to be flexible. But I think the things we don't take into account – we're still the eighth largest construction market in the world. We're still the eighth largest. We're still one of the most mature. We're still one of the most respected. And I think those of you [unclear] going through a structural change – there's no doubt about it. And if you look at the global construction output, China this year will achieve 8% in the construction industry growth and it will exceed \$1 trillion. So they're both a threat and an opportunity. And, talking of being flexible, if you think of the US construction industry, three years ago it was turning over \$1.034 trillion. Last year it turned over about \$830 million (sic) – so that kind of contraction of 20%. So we're not alone in the structural change that's going on.

So we've got two very eminent speakers. I can introduce the first one, which is Richard Baldwin. Richard's a director of Derwent, London. He is a chartered surveyor. He had 30 years' experience in the central London office market, with David [unclear] where he was a director. He's been responsible for the successful delivery of refurbishment and development projects, and he's going to talk to us about some of those projects and some of his experience. I know he's had a tough time recently. He's come back from holiday and moved house and he couldn't find a station for him to get to London, so, hopefully he will be fine today. So, Richard.

R: I'm, as Roger said, I'm the head of development at Derwent London. And some of you may know about Derwent London; some of you may not, but I'll just kind of crack on and make sure I press the right- yes. Okay. This is essentially what Derwent London are about. [unclear] this side. So, yes. We own about 5½ million square feet of commercial office space in central London, and 95% of our business is in central London. The other 5% is in odd places due to mergers with other companies. But we always focused on, particularly what we call the villages in London. These are the ones where we're very active. And essentially if you sort of, you know, put a pin in the map on [unclear] surface and draw a map for about three miles, you get the vast majority of what we do. So we're very focused on central London and very focused on what we see as up-and-coming areas of central London. We don't do anything in The City. Where we've got our city circle

there. That's very much kind of city-friendly – the kind of Shoreditch area. So that's where we kind of operate.

As I said, we operate exclusively in the office sector. We don't do ressie; we don't do retail. We don't do anything else. We do do a little bit of ressie as a consequence of office developments. You have to do the ressie component when you get an uplift in the commercial space. And then you have to get into the whole beautiful world of affordable housing, which is an absolute minefield and could be a topic of a completely separate day about how you provide decent, affordable housing in the right locations in central London but, God, what a business that is.

And the other two key things about us, we- 90%+ of our work is in the refurbishment of the existing space. Our typical business model has always been to go and buy buildings like this. This is the old pincer mason building on [unclear] green. And we're just about to- we've got planning permission for it. We're just about to commence the detailed design of it and we're doing the stripping out at the moment. But, typically, we will go for that type of building and we will look to refurbish it. We will look to improve its sustainability credentials; we will look to improve the quality of space internally, and we will look to uplift the amount of net lettable space in the building.

And finally we want to make it look good. And we kind of feel that's a bit of our USP where we make some pretty tired buildings look good. In other words, we adapt, and I think that's probably why I was asked to come along and talk, but we're pretty famous for taking the existing buildings, or adapting it, and adapting it in a way that it then becomes very attractive to the market. We've got something like- Apparently we've got 99% of our space let, which is an amazing statistic for a property company. We can't kind of build it quickly enough; we can't find enough of these kind of buildings to take and adapt and to bring to market.

The other big thing about us which is, you know, goes to the core of this adaptability for me, and what kind of drives adaptability is whether you're in it for the long run. We at Derwent London are in it for the long run. We're not a developer-trader. We don't actually just buy a building, develop it and then sell it on to an institution as an investment vehicle. What we do is we retain buildings like this and so, in 15 years' time, when the existing tenant moves out of that building and codes of construction have moved on, when the types of tenants who've moved on who are in that type of area, you'll look to adapt that building again, and it will be very interesting, you know, if we all get to the end of our careers and you look back over the lifecycle of all of our buildings and see what uses they've all got to. But that is key, so we own it and so we're really going to look after it and we really want to make sure that whatever we do to it now, we have got an eye to the future as to what could it possibly be like going forward.

We've always been, about these four kind of key things. This is a shot, by the way, of the Johnson Building – another one of our refurb buildings on Hatton Garden – HMM were the architect. [unclear] I'll get into trouble with Simon and the guys there, but we've always been primarily about these four things. We've always been about the creation of great space, and when we talk about space, we talk about volume. I'm not talking about the lettable area – obviously that's important in terms of the financial equation, but it's the volume of the space that it's going to sell the space to the tenant.

We've always been very focused on cost. We've always wanted to deliver an affordable product in the market. And part of what I'm going to talk about in a minute, which is the thing called the white collar factory, is a response to the market, which was first of all driven out of driving down the cost of the space that we provide to the market so that we can offer it at a lower rent and, therefore, we get a bigger pool of potential tenants. We are not in the market of trying to achieve £70 for rent and only letting space to hedge funds. We're much more in the world of people who want to pay somewhere in the region of £35-45 a square foot – people who are likely to start up business – small businesses trying to grow. We don't mind the big tenants, by the way, [unclear] tenants. But we've always had an eye to this cost issue.

This whole issue about place, as you know, [unclear] kind of areas of London that we're very interested in. We've always had a sense of what London is about; we've always had a sense of what's an up-and-coming area, what's an interesting area, where there are going to be good amenities. It is no coincidence that many of the projects in our current pipeline have [unclear] are actually working on at the moment in terms of planning, feasibility or actual construction. You'll find that they all sit very, very close to cross-rail. As far as we're concerned, cross-rail is creating a new sense of place in central London. It's a new method by which you're going to get loads of people coming in to certain areas, and areas will change as a consequence of it. So, that's a kind of a new agenda for us that plays- it used to be about, oh, it's Shoreditch, trendy. It's [unclear] trendy. It is, you know? What's happening in Soho? That kind of stuff. But it can cover all sorts of things.

And the final thing, which is definitely kind of moving continuously up the agenda, I would say. You know? Maybe it kind of started 10 years ago. I've probably got that wrong, but it seems to have moved up and up the agenda, and this whole sustainability issue is top of the agenda as far as our tenants are concerned. The facilities manager guys are all very interested in how much it's going to cost to run the building and all that kind of stuff, so they're very interested from that point of view. But the majority of the people who are in the building, the people who are working in there, are very interested in these green credentials, and the directors of the companies who work into our buildings are very interested in the image it portrays about their organisation. There are not many organisations that want to move into a non-sustainable, non-green building. So, once again, you'll see this come through. [unclear] This is just some of the buildings, you know, that we've done. And every single one of them, bar that one, which is just round the back of Tottenham [unclear] road, is a refurb, and one hopefully that you've all heard about or that you're all going to hear about as long as you watch the telly is the Angel Building, which was recently completed about a year and a half ago. HMM were the architects, and that's where we took an existing building up at the Angel Islington, it's up at the top end of Clerkenwell, and we took the building all the way back to the frame and we basically then built around the existing frame, created a new atrium, created some wonderful terraces, great views over the West End and over the city, and we've just fully let that building. Expedia are the last tenant to kind of go in there, and Jamie's Kitchen is moving in, I think, that bit there, so it's going to be a great trendy restaurant.

So we hope- We're in the shortlist for Stanley Price. We're in the last six. It's the first time that a refurb-type building has kind of made it into the last six. And we're up against some pretty stiff opposition. We're up against the Hopkins Cycle Track. As I said to the Hopkins guys, I said it's pretty obvious there's a cycle track – you just put a roof on top of it and pull it up at both ends.

But we're- [unclear] I know them well. I think they're going to win it. But it's very interesting that a building like that, which has got a lot going for it in terms of its sustainability credentials, in terms of its adaptability, in terms of its reuse, in terms of its attractiveness and creation, in terms of place. Yes. It will be interesting to see how it goes. [unclear] people look out for it.

I'm always struck by this. This quote, I'm afraid, I use quite a lot. What is the city [unclear] people? [unclear] show to it. And we spend a lot of time thinking about the people who are going to move into our buildings. And we spend a lot of time thinking about what they're going to do in our buildings. And it then starts to inform what we're going to do to the building. And it's all- it's quite simple, because it's about making it attractive to the tenant. We use agents, and many people talk very disparagingly about agents, but we use agents – we use CDRE, hi Frank, all of the guys, you know, go around marketing space, office space in London, because they've got the address of all the tenants. But we find we get a significant number of tenants picking up the phone to us and saying, oh, we were in such and such. We've heard about- We'd really like some space. Like the space you provide. And then there doesn't seem to be much of it around. And they're right – there isn't that much of it around. The majority of space, office space in central London, is pretty formulaic. It's formulaic because it sells, but also our space sells, so there's room for both in the market. So, I'm not going to disparage what people like – land securities, British land and those sorts do. It is different from what we do, though. Although they're moving into our direction.

I've always taken this kind of, you know, we've always had this adaptability issue on the agenda and for us, it's very simple. You know? We ask this question and we asked this question of our design teams at the beginning of all projects. You know? And we want to be able to adjust to new conditions and what we do find over the course of a project, and unfortunately planning takes quite a long time in central London, longer in some boroughs than others, and you can question me privately about that afterwards, what you find is that you have to adapt to new conditions even over the course of the plan, the project. And then you have to adapt the new conditions on the type of tenant that's coming in. The types of tenants that we attract tend to be, the majority of them, to be in the creative side of the industries, and they tend to want fairly special space. You know? There'll be photographers who want a completely dark basement, or whether it's want designers who want more light than the sun gives out on the course of a sunny day. You know? It's kind of amazing kind of stuff they want. It's not like letting to a big banker or a big insurance company who just wants one desk per person per 90 square feet, and that's kind of it. You know? A fairly kind of standard spec. So we have to adapt our buildings as we design them to meet our tenants' needs, and I think that's part of the story as well as to why we're attracted to tenants – that we do adapt our space. And then this thing goes back to our long-term ownership. It's the ability to actually modify for any use or purpose, at some point in the future. so we always have an eye to this.

So that's kind of a bit of a background to where we are, what we've been up to and what our current philosophies have been and how we've been addressing the market. What we did about a year and a half ago, two years ago, with AHMM – a firm of architects we used a lot and with other what we call our home consultants – people we work with on a continuous basis, we just stood back and developed this thing called the white collar factory concept. And you may have read about it. You may have even seen- if you've ever seen me present before, I've presented on

this before but I've never had such good material as this and I've got to thank Rebecca in the office who's pulled this together for me – she's really great.

This building on the right here is city row. It's a project on the corner of the Old Street roundabout. And it's been designed by HMM and it's been designed on the basis of the white collar factory concept. And quite simply, the white collar factory concept is about a five-point plan. It's about tall ceilings – this goes back to our volume point – it's about smart servicing, and I'll go into a bit of detail about that. It's about certification of the facades and, you know, façades have gone from really simple, I don't know, maybe 50 years ago to amazingly complex, you know, the Germans have got it down to a fine art in terms of complexity of façade, fantastic BMW-style engineering, but it's pretty pricey.

We're also into flexible floor-plates. This goes into, you know, what our tenants really want to do in the space. And we're also into actually using the biggest component – the cost of the project and the structure, so actually using it for something rather than just making it stand up. So it's kind of like a five-point plan that we developed. And the whole concept of it was lower cost, added value. We don't want to be in a world where we're charging these high rates because we just don't think there's a volume of market [unclear]. We do think there's a volume market in our bracket, 35-45. And these images, by the way, have all been done by HMM. We've- it's interesting when you're talking to agents and you sort of say to them, well, yes – we've got this kind of space which is effectively, you know, a bit of a concrete box. And how is it going to look like? How is the tenant going to occupy it? And you have to kind of fire the imagination of agents a bit. So, this is what can be done to the space. We've done a whole kind of series of options of what it could potentially look like.

So, step one is this kind of tall ceiling thing. And, as I say, once again, these are all kind of images from how we would- how we would see the space kind of being used. And you could see it's very much along the lines of it's in the world of the creative. You know? The tall ceilings give the kind of increased flexibility of use. It gives the volume for retrofitting. Basically, the only reason you would knock down a building, the only reason we would knock down an existing building, is if the floor ceiling height were just that poor that you really couldn't do anything within that space. So you will see that whenever we go out and buy a building, we will always be looking for that inherent structural debt within the building that is going to be able to give us the ability to retrofit, you know, within that kind of volume. And we then just went through this whole series of reasons as to why, you know, why we're going to do it. Increased daylight. You know? Daylight is just so massively important to tenants and to all of us, really. [unclear] personally. [unclear] (Laughs) window and a bit of light coming in. But, you know, that's what we kind of believe in. So I won't go [unclear] kind of get a bit boring but essentially we believe that tall ceilings give us that volume, which gives us that light, and that is a key point of it.

The smart servicing – we want to actually put less kit into the building. I mean, you know, the way office buildings have been built over the years is people have just put more and more [unclear] into them to control the conditions more and more. We tried to just strip that all the way back. We said let's put less [unclear] in; let's let the tenant decide the extent of the kit that they want to put in. Invariably the tenant doesn't want to put that much kit in when they actually get down to it, especially when they work out the cost of putting it in. The less kit we put in, the less rent we

charge, because the less cost we incur, the less rent we have to charge. So there's that kind of equation there in terms of cost.

And we go for this concrete cooling – concrete core cooling. We spent a lot of time working on what we were going to call this, but it's- it's not rocket science, this system; it's just pipes in the concrete with cold water going through them, so the concrete is effectively acting as a radiator, but it's a radiator putting out cooling rather than heating. So it's nothing new. People get a little worried. What happens if I drill, drill a hole in it? Well, as you drill a hole in it, it's going to leak. So don't drill a hole in it. Fairly straightforward stuff.

And we're very into the use of the kind of passive systems in terms of the servicing. But the concrete core cooling is a key component of it. I suppose in a simple façade, you know, it's about putting the shading where it's necessary. It's not about saying, oh, we've got to have shading everywhere just so the building is the same everywhere – just put it where you need it. It's about having openable windows controlled by the users and there is no greater joy than being able to open a window and just [unclear] fresh air or maybe even a gust of warm air. You know? You've got the ability to change it.

And then, actually, you've changed the percentage of glazing on each one of the elevations to suit, you know, the aspect of the building. So it's moving away from this idea that all four elevations of the building have to be exactly the same, which I know some architects may be [unclear] a bit challenging, but certainly with the architects we deal with, [unclear] joy, the juxtaposition of one elevation is going to be different from another, and it's actually going to respond to the environment.

Flexible floor plates. You know? We just basically sort of- These diagrams I've been illustrating to you, if you look carefully there are different degrees of cellarisation within the space. This is the cellarisation that goes floor to ceiling, so there's the manager in his office kind of feeling nicely sealed in his glass box. The previous ones were like pod- polyfers (?) stuck on the floors.

And this is about sort of saying you've got all this big, open-plan space; you've got these good clear span structures; you've got this volume; you've got this very simple, passive surfacing; you've got these openable windows. So, actually, it's a very flexible floor plate. And you've- You plan also and divide the floors up into two tenancies. So it's a very straightforward system that gives you maximum flexibility in which you can do what you like. And then there's this whole thing about using concrete. You know? We're great fans of concrete. We don't want rough concrete; we want good-looking concrete, so we always challenge our contractors to make sure that they do work hard to give us a good-quality finish, but it's all about using the thermal mass of the structure, and using it rather than putting in steel and then cladding it and putting in fire protection and it's actually not giving you any benefit whatsoever to the thermal conditioning of the building.

So, we're great fans of concrete, but what we don't want to do then is start decorating it and painting it or doing anything fancy with it, so we just want to do it as a one-stop- one-stop operation in terms of the type of building that we deliver. There is an alternative one. There is this thing out there called the BCO, which we are members of – I am a member of the BCO. I'm

membership number 563 or something like that, I think. And the BCO have been around for a good 15-odd years, maybe even a bit longer. And there's this guide to specification, and it's a big book – it's about that thick. It's worthwhile having a look at. It goes to BCO website, but it's a very detailed book, which goes through all of that lot, all the [unclear] right from what they call the drivers for change, which is an attempt to kind of look forward to what tenants are after. But then it goes through standard specifications for each component of the building. And the BCO tries to achieve a balance between what the industry thinks tenants should have, between what tenants think they should have, and they try to drive a kind of a uniform specification, and this is a document that, at the beginning of every project, that when a tenant approaches a landlord to say, oh, I'm thinking about taking your space, and could you talk to my advisors? The first question from the advisors is, does it meet the BCO spec? And there's then a checklist and you go through it.

Now, our white collar factory concept broadly meets the BCO spec except in one key area: the BCO spec requires you to have a certain temperature range. We're slightly out of that temperature range in terms of the air temperature, but we are within what we call a sense of comfort about the kind of feel of the space that you're in because of the volume and because of the light. The passive cooling doesn't work as well as the intrusive cooling – when you get cold air blowing at you. And, as a tenant, you've kind of got to accept a little bit of a compromise. If you want to go for this sustainability agenda. If you want to go for this volume, this light; if you want to have these kind of green credentials, you've got to accept a slight change in what could be provided. So it's always interesting. We always benchmark all of our projects against the BCO spec because we know all of our tenants will, but what we're seeing more and more, you know, evidenced by our vacancy rate, is that tenants are accepting an alternative to this standard specification that's out there in the market. Last – I don't know if any of you want to answer these questions. These are the questions that are put to me for this, and I don't [unclear] a bit difficult. I'm not going to answer them.

But I just thought- I haven't thought about any of the answers to them but I just thought they might have formed the basis, because I know it's difficult with people always asking questions. I just thought we might, you know, want to talk about some of those questions if that's what we want to do. There is going to be more information out of the white-collar factory – more detail. And we are actually bringing it to market off the back of our city row project which goes in for planning in about a month's time. And it's going to be an interesting challenge. It's going to be a very kind of new product in a market which is dominated by that BCO spec type world, but we're confident it's going to be successful, and we look forward to a fully let [unclear] in the not-too-distant future. Thanks very much.

C: What we're going to do is take questions at the end. Can I introduce our second speaker, which is Professor Jim Saker. Jim was- I said, well, how do you want me to introduce you, Jim? And he said, well, make sure they don't think I'm from the construction industry. But he is a professor of retail, [unclear] professor of retail management at Loughborough. I have been at meetings with him and I know he's a very lateral thinker, so I'm looking forward to what you've got to say.

J: Okay. Thanks very much indeed. As I said, I'm Jom school of [unclear] economics [unclear] university. And Alistair and Simon, who had this big project advises us to join. I'd like to give a kind

of different perspective on the kind of [unclear] futures and what it was about and also the idea of adaptability within the construction industry.

My background is the motor industry and, therefore, I'm coming at it from a slightly different perspective and so we just want to add some value into this kind of whole process. Paul Warner finished the culture talk with a quote from Charles Darwin. It's not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change. And we see that in the business world at the time. You know? We can't [unclear] that [unclear] have a bit of a problem and, you know, that sort of thing. And maybe it is business organisations [unclear] evolved. But is it buildings that don't adapt that get demolished? Is that the kind of logic? And I think there's an interesting dynamic within this that sort of says, do you build or adapt [unclear] or is it about adapting or changing existing builders? And I think there's a [unclear] dilemma [unclear] sort of face. There are, in fact, I think somebody said this morning in New York, you know, one [unclear] building survived, and maybe it's the capacity of the market to actually adapt to that building. In our industry, there's one quite famous one involving cars. They don't actually change a great deal but everybody adapts to them, and if you want a rough ride, you know, and a sporty ride, that's fine, but it's fascinating, isn't it? That they've survived without change while others that fail- It may be that it is the iconic buildings that actually have that capability without adapting and the [unclear] ceiling heights, the Georgian houses – all of that sort of thing becomes part of this debate.

And what we were really asked to do is to really address this issue. If there were a business case for adaptability, it would be happening as a matter of course. You know? That's the logic, isn't it? In our world, in the business world, if you make a business case for it, nobody does it, because that's where, you know, people follow money. And therefore, I think what we were examining is to say, if there is a business case and [unclear] civil engineering or massive enthusiastic [unclear] concept of adaptability, there is a [unclear]. Is this something which exalts the market in some sort of way which actually then says we don't do it as a result of that. And so, what we've tried to do is to say, look, let's try to identify from the stakeholders in this whole process and ask them further questions, which- Which [unclear] very similar to the ones that [unclear] limitation.

What do different stakeholders mean by the term, "adaptability"? What do they see as the drivers behind developing more adaptable buildings? What do you see are the barriers to developing [unclear] barriers to developing more adaptable buildings? What do you think would need to change more buildings to be designed to be more adaptable? And what we did was we went out to 86 different people who were considered to be stakeholders within this kind of debate. And there's an [unclear] television programme, I think, about asking families or celebrity family kind of fortune where, if you asked 86 people, you know.

What would they say? You know? It's something like that. That sort of stuff. I felt that we were actually researchers playing Family Fortunes. You know? We went round the group saying what do you think this actually means? And it started to come out- this was the type of thing that people were saying. Adaptability is about [unclear], future proofing, unfinished spaces, providing redundancy, looseness of fit, simple design solutions, open design goods. Those were the types of message that we were [unclear] again, and people were sort of saying that adaptability was about.

And therefore what we tried then to do was say if this is what we think, let's try and give a bit more of a deeper dive into the different aspects. On future proofing, you're effectively future-proofing the building by trying to second guess what would be as relevant today as will be in 10 years' time or 20 years' time. And that's quite interesting. You're saying, what you're trying to do with adaptability is to second guess the future, and that becomes a challenge – that is an issue. And we visited a- a site in Milan. And they have built here a facility which will be used as office labs on light industrial. That was the [unclear] done by [Segra] and they said you can combine different uses, [unclear] flexibility – it was part of the change in flux of the future of the Italian economy.

And therefore that had adaptability built into it from day one. The challenge is, and I think it's quite an interesting challenge, how does that actually work? If you've got a building which is adaptable, would you actually want light industrial sitting next to your office space? So, therefore, does it have to be a massive transformation for this to work, thereby the [unclear] Milan, everything has to be there transformed as a light industrial, or has to be transformed into office- for this adaptability to actually pay benefit.

And it ended up with quite an interesting debate as to exactly what happens here. How does that mechanism work? You've built in the adaptability. What actually triggers the change? What actually makes that an acceptable change? See, in my own industry, we do a lot of stuff trying to forecast the future. This is just an aside from Toyota. What they were looking at was saying, into the future, in 2015, what will the demand for cars be like? And one aspect of this is to do with patchwork society. And, they said that, basically, they did the research and said the number of traditional new [unclear] in Europe would decrease or has decreased by 14% in the last 10 years. Yes? 85% agree that family is the main priority in life. Now, this is the first thing which is [unclear]. So therefore what's happening is that everybody is saying that families are actually the main priority in life but nobody wants to live with them.

I mean, it's this kind of [unclear] tension. So how do you react or adapt to that? And, you know, there will be more households going forward. So, as a car manufacturer. Take, A – this is a European family. Okay? So just give the impression. It's not British. You've got Michel and Ingrid and they had- they've got a kid called Jules. Okay with that? Michel used to be with Agnis. So they had two kids, Rodney and Arthur. Ingrid was with Francois. They had something called Cyril. Not quite sure what Cyril is, but they've had it. Francois' a [unclear] Angel. Now, here comes the challenge. Under the custody arrangements, if that's the right term for them, in week one, Ingrid and Michel have Jules in the family. That's good. Excellent. Because of the arrangements at the weekend, Ingrid and Michel also [unclear] Arthur and Cyril. Next week, Ingrid and Michel end up with Cyril and Jules. The question is, what car do you want? Do you want 1 for 3 people? 1 for 6 people? Or 1 for 4 people? And that's the challenge. How do you build in adaptability into a different type of environment? So, what did they do?

Get the bus. So [unclear] just by, B, making use of [unclear] so the bigger it is, the better – and they can always fit them all in. Or [unclear] got the most [unclear] car industry [unclear]. They built five plus two. Remember there's a big trend. You know? For five seats plus two. And the two in the back – the kids that you don't like or the ones with bendy legs – that sort of-

That sort of feel about it. So what they were doing was kind of building adaptability into the system itself as a result of the current research. But, that's not difficult with buildings. That predictability, that forecasting going forward. The other issue is that people kind of talked about overdesigning. It's like floor-loadings. You know? Over-specifying floor loadings is great, but it costs money. Under-specifying, it may cost you money, when you first let it. It costs you a hell of a lot of money later when you muck around with bits of the building. You affect the floor loadings and you can't let the shop because you've [unclear]. You know? All of a sudden, the person on that interview was just getting onto a bit of a roll with that floor loadings. The over-designing. Does it mean that to have an adaptable building, you have to over-design it?

Is it to do with providing, therefore, redundancy within the building? Developing the building at Loughborough. In fact, the one that Alistair and Simon are going to have. Initially, they have actually had a building like this which was supposed to be massively adaptable, but the idea was that then you provided elements of redundancy with it. I suppose, in my world, it was almost like supersizing it. You know? It's like going to McDonald's after a supersize or something. You actually had, in your idea of going bigger, and therefore that builds in adaptability as a result of that. Simple design solutions. Another one that came through from the stakeholders. They were saying, what it is is to do with actually getting simplicity and therefore having more adaptability within each individual building. And, this is the idea of sort of hanging rails [unclear] you actually go into the- this is a health centre. You put hang-rails in which allows you to drop stuff in, basically, and change the use from maybe an office to a clinical facility or whatever very easy and make magnetic bits on the doors, so you don't sort of stick them- the person [unclear] off. Those are the sorts of things that people believed were the heart of adaptability from the stakeholder perspective. The question was, you know, what were the drivers? What are the things that actually drive [unclear] destruction [unclear] environmental impact [unclear] longer building [unclear]. That's what the stakeholders were saying adaptability means from the point of view of the drivers on it. These are the things that you're looking to do.

One of the cases we looked at was the Sainsbury Centre for Visual Arts. And it was a Norman Foster building, constructed from a kit of parts and the solution, which is like [unclear] cladding, but basically, you know, as a non-technical person, basically it appeared you bolted the stuff on, bolted the stuff off, and it seemed quite cheap to do. As you wanted to change stuff, that seemed to be the kind of the mind-set of it. And therefore, you reduce the construction side and also cost. That seemed to be one of the major drivers.

Another major driver was the issue of falling lease types. Almost you had [unclear] years the least types dropped over a period of time, so that now you're in a position whereby the lease is being done for offices, unless the old 20-year ones you used to have [unclear] where we're going, very much to the European system of, you know, maybe 3, 6 or 9 years, and therefore there is a need to build in the adaptability as you go forward. The barriers they identified were simple ones – it cost too much, clients don't want it, the benefits are too small, future's too uncertain. It will compromise design. It's not my decision.

In a sense, I like buildings that last for 500 years. I'd like them to change [unclear] 10 times. I'd like to be able to dismantle an office façade and put another kind of façade to respond to climate and all the- That sort of idea was pretty fundamental to what [unclear] was saying. It just costs too

much. The issue is how do you operate with a high cost up front when you face issues of economic decline? And then it's not my decision. This is the slide which [unclear] put up earlier. You know? It's not my fault, basically; it's somebody else's. You know? I would do it but there's no demand. You know? So the investors say there's no demand – the others say we'd like it but not available. Then again, developers don't ask for it and it goes on. You see the whole sort of cycle spinning around, and so there's no real demand – nobody breaks out of that cycle. You know? It's not my decision. [unclear] flexibility and then the contractor might come in and say I'm going to do the whole thing in- the whole thing in low [unclear] short-spedced, then the actual flexibility is good.

And this was quite an interesting one. Sort of the going back to that energy part [unclear] the land. It was designed to accommodate industrial use, therefore the windows had to be openable, therefore the occupants opened the windows and completely screwed up the whole sort of building management system. So if you get a bit more windows out, well, undoubtedly. You know? But if you then build [unclear] system that says don't open the windows, and it's that sort of [unclear] be offering stakeholders. And it's a [unclear].

Something very nice about [unclear]ility. And the idea of actually having a Savile Row suit – it only suits one person but it makes you look slim, Because Armani kind of spreads it out a bit more. You know? You can get away with it by being a bit fatter. I personally would probably go for the flatter one. You know? It's just an option. But, you know, it's that sort of balance. That sort of feeling.

What is the change? And then they were saying [unclear] were saying that the increase in value [unclear] legislation, secularisation, changing industry mindsets [unclear] cost [unclear] more clarity in the cost [unclear] changing the planning rules. Those are the types of drivers which, as I say, needs to happen. And to do that, you need to have a change in policy makers. The institutional framework – the bank's industrial organisations [unclear] plan [unclear] advisors.

What else needs to change? Big question. And it- [unclear] before [unclear] normally. But this is a picture from the hotel window that I was staying at. I was thinking about what to say and you sort of think, actually, that really does show a certain amount of [unclear]ability. This is Clark Key in Singapore. It's about to become the Moon. [unclear] the Moon in China – Chinese terms – and today they put up the temporary accommodation to make all the decorations that are going to go up in Singapore. What you had was the traders, the old traders in Clark Key, lived in the houses. That's now become a restaurant area, but there's no space for the restaurant, so they build out over the river and adapt the space, or lack of it, above that. Because it's so hot, they like to keep people cool, so they put up large, plastic umbrellas all the way around with air conditioning underneath and, again, another adapting of the environment.

This building over here used to be the old brothel. That's now a brewery. So it's not that far. Anyway, there's adaptability there. But then you go to this and then you see the boat on top of the buildings and it's also- you go, what's that all about? And the lesson I learned from my business in Singapore was that the traders, the biggest trader, built the tallest house. Not the

largest; the tallest. And so therefore, across the world, especially in the Far East, everyone's trying to build the tallest building; not the most adaptable.

C: We've got about 10 minutes for questions. Can we put a couple of chairs at the front for the speakers ?

Q: My company is asymmetric. You had a list there of all of the stakeholders and criteria. One thing was missing there, to me [unclear] the area. Particularly as you, yourself, come from that industry – the [unclear] engineering [unclear] cars [unclear] engineer to discuss. Now, without production engineering and mass production, you will never, ever get to the changes that you're looking for in the same way that the car industry couldn't possibly produce vehicles the way they do at such a cheap, cheap price, and better built than your house, with the furniture in it, better furniture in it than the furniture you've got in your house without mass production.

J: I think it is very, very- There are projects going on at the moment that are looking at the production side of the industry. And I think Alistair's doing well [unclear] we're extruding all and all sorts of stuff. There's a whole range of things that are going on. In- it wasn't- I think it was just more from the point of view that these kids are going to be the key stakeholders in making the decisions to build adaptably. Does that make sense? And so therefore it's- I suppose, from my industry, we tend to be driven by the market. So if the market is saying we want five plus two, then we have to produce five plus two, and therefore I think it was more [unclear] take it outward look and say the market, who are the key current decision makers? Who are the market players here making an impact on this decision? So I think it was that that kind of drove a selection. But I take your point.

Q: Question for *Mr. Saker*. It seems to me that the evidence base for adaptability is a little bit lacking. Sorry. I'm not being overcritical. What we've had is a collection of anecdotes. And if you do the comparison with medicine, if you're looking at a particular medical policy, it would have done longitudinal studies involving thousands of people to find out the effectiveness of that policy. And I don't see why that can't be done with buildings, because the history of buildings is readily available from leases, details in the planning system, records of construction changes. Why aren't people looking at, literally, hundreds of buildings to look at what's happened to them over the last 20 years and whether the adaptations have been, in terms of [unclear] and more to the point, economics, have they been successful?

J: Yes. We are doing an *adaptableing* project which some of the guys are working on and what they're doing is they're looking and saying, how *has change* taken place? This was looking very much to the stakeholders and saying, why do we not deal with more adaptable buildings?

Totally take your point – but what we were trying to do was to say, look – going into the future, what are the barriers which actually stop people- we know that people renovate, rejuvenate, you know, buildings, and there are certain dimensions – certainly key performance things, really [unclear] ceiling – that sort of stuff which needs to be in place which actually encourages that, and there are other buildings people just knock down. And I think it's that sort of- the balance

between we've looked back and I think, you know, [unclear] could report on the adaptabilling (?) project,

Whereas this is looking at the adaptable futures. But I take your point – you know? As research methodology, you go back, but that doesn't- to us, it didn't actually focus a key decision that what stops people building adaptability in there [unclear] issues?

C: Alastair, while you're in the room, would you just make any comment [unclear]?

A: Yes. We have done that [unclear] Jim's quite right. There is an additional project which we're not specifically discussing today, which is doing just that. It's trying to find out that. At the time, the pure reality is that the time when we're going for the money, lots of people were doing stuff about researching old buildings, but nobody was thinking about the new buildings, and that's where this particular focus-

Q: I think so much of what I've learned about today and so much of what I saw in Richard's presentation – adaptability is about getting the base things right. And I don't mean big, small; I mean right.

R: Having done Derwent-style buildings in the higher education sector in the last four years, both- and new, [unclear] currently trying to refurbish and regenerate ones, the big challenge to us is end-user expectation and, you know, I think in the last 20, 30 years, end users specifically in the sort of banking world [unclear] talked about [unclear] have gotten used to intelligent buildings.

Recent buildings have got, you know, controls and everything, and what we've struggled with, but I think we're starting to succeed, is having end users now who are accepting that for four or five weeks of the year that they might be slightly over hot. And it's not often in the summer. It is often the peak period – the change of periods and things of this nature. And I think it's about end user expectation and acceptability that, for the greater [unclear] they've got to tolerate the peaks and troughs and not have the neediness.

Yes. I'd agree with that. We often play very much that kind of let's move slightly away from the BCO spec but then let's just talk about the impact that that's going to have on sustainability. And, if you can actually show an enormous advantage under the sustainability agenda by varying your temperature range by two degrees C, invariably with, well, in, you know, actually just about every case I've known, the tenant, the types of tenant that we're dealing with, will accept that and will say, yes, I take the sustainability bag because that's a great message to- it's a great message about our business; it's a great message to our people and I'll take the problem of the extra day – all the extra two days. And anyway, everybody's on summer holiday then. You know? And this is how you get these conversations. But that's why I said that the sustainability agenda has moved right up to the top of the agenda, especially with the types of tenants that we- that we work with. You know? We don't roll out hundreds of thousands of square feet for Halifax banking or stuff like that. Other people do that kind of stuff.

- Q: As a tenant of a supposedly intelligent building, I think ours is special needs. It's supposed to be learning or something. It will take us six months, really, to learn about us. Leave windows randomly open, clothes; we actually appear to have a new aquatic centre that appeared when the water came flooding in. It's kind of an interesting dynamic. I think there are certain tolerances that you'll allow. But it's when you've got no control, you know, you cannot control it and when the windows are opened you're thinking, "How do I stop that?" You know? And I think it is a big challenge.
- C: Using the car as an interesting example. A lot of products depreciate quite quickly. Although, there are a few notable examples where it doesn't happen, and what I'd be interested to know, from Richard, is if you could just very quickly tell us, you mentioned [unclear] the Georgian building. What is, Richard- What do you think is that characterises that building that, really, more than just add value and, you know, the general increase in value of properties but differentiates itself by becoming something that has greater value because of it. It's got to last you a very long time, basically. What are the characteristics of the building that [unclear] a super barrier, like the Georgian terrace, for example.
- R: Well, for us, it's about two different things. It's about that floor ceiling height. In other words, it's got that volume, because it's very expensive to start fiddling about with structure to create that volume, so you're looking for that inherent value in its volume. And the second big thing we're always looking for is architectural interest. I mean I, you know, no disrespect to the energy centre in Milan – it certainly wouldn't uplift my spirits of a morning if I were walking into it, but if I were walking into, you know, the vast majority of the buildings that we do, we're trying to create a sense of place – you're trying to give it a certain architectural quality. You know? I believe it lifts your spirits and you're looking for a building that you can adapt and it is going to lift and this is, for me, you know, back to my Shakespeare quote – it's all about the people who are going to inhabit it. And, you know, I feel sure there are some fantastic studies that can be done. You know? An extra 1% of happiness for the 200 people that work in the building must be worth millions over the lifespan of the building for the sake of giving it that bit of architectural oomph and quality. And so they're the two things that we're looking for.
- Q: I was also- as you were describing your building, it struck me- it reminded me of the early 20th century London schools, and that used lots of light and high floors and ceilings for something that really has stayed the course there as well. So *it* hasn't changed that much, actually.
- R: Yes, yes. And it's no coincidence, is it?, that many of the buildings that we look to buy are old schools and many of them are actually too small, you know, for commercial offices, but a lot of them get bought up for small, you know, really largely residential projects. You know? It's no coincidence.
- Q: Yes. Just a point, really. Deborah Rose Leicester City council based on experience, really. In the past, with the funders and with the intimate bodies that are going to acquire these buildings, building the inductability has often just been seen as an expensive luxury at the beginning, and if you wanted to reduce the cost, that's been the most expensive thing. What we're finding

increasingly now is they're much more interesting in adaptability because that de-risks a project for them in the long term, because people are going to hold that building. And there's been a complete change of approach to adaptability and sustainability.

R: Yes. Well, that's exactly where we are coming from because we are long-term investors. If you, you know, talk about the barriers to change, if you make people hang on to something they're going to make or going to build, they're going to take a lot more care with it than if they're just going to trade it the following year.

Q: Particularly with student accommodation. That were built in the past, just for student accommodation, and then there's no market for it. You can now get those developers to build in a much more adaptable way. And that does de-risk it for everybody.

R: Yes, yes.

C: I'm going to call it to a close. Can I just thank the two very good speakers? They've really given some [unclear]. Thank you very much. Thank you.