Architecture Lecture Q&A with Julia Barfield.

This is a transcript of the Q&A's recorded at the event. The text has been edited in places to improve its clarity.

Question

How are developers reacting to the ideas on Re-use and also how do you overcome the reluctance of councils to allow for tree planting.

Answer

Bigger developers, like Grosvenor and British Land, who have large estates are actually moving materials from one building to another, but that's just a beginning. There are companies who are coming in and trying to do a digital marketplace. I consider this a start as there is going to have to be physical material stores as well. Tthere is one in Belgium, for example, called Roto in Brussels that started about six or seven years ago; it seems to be working well. But you're right, we need to create that marketplace. There are a number of companies who are who are working on this at the moment.

And in terms of trees, I don't know. I just think trees are just wonderful and we should have more of them. It's a serious question. We do need more trees and I really don't understand the attitude of councils, they do need to just solve the problems whatever problems arise. They need to solve the problems; trees are necessary is what I would say.

Question

You talked a little bit about the recycling of the material which was fantastic. Your last project, though, came in an area where you could recycle ideas. When I was a young engineer, we used to talk about the Severn Barrage, one of my own students was very senior in the Swansea Barrage project, but it turned down after a long period of time. Why do you want to start with a brand new scheme instead of maybe going back to some of the old schemes and seeing if they could be cheaply achieved now?

Answer

The Swansea Barrage was a much smaller scheme; the reason the Severn scheme is much more cost effective is the scale of it. I think Swansea scheme didn't happen, because it was too small. There's been recently a commission that has actually shown that the Seven barrage is actually the most cost-effective because of the scale of it.

Question

When you're building such an immense construction as this building (the Severn Scheme), and with a lot of hard thinking, how do you, if it's going to last 120 years, allow for potential sea level rises?

Answer

Yes, we would have to factor that in. What I didn't show was that the thing is, this is not new technology. This is technology that's been going for many years. So in France, there's a project called La Rance, which was opened in 1966 by Charles de Gaulle. I saw a film recently of him opening it. So that's been going since 1966. It's technology that's proven itself. And there's another one in South Korea.

Question

I was very lucky to see you many years ago, prior to the London Eye and you were talking in Winchester, to Winchester Architects. And you were setting up this concept for the London Eye. I was sitting in the audience, very sceptical. But then a year later, it was on books and was being built. I'm very interested in the barrage. Because I think that's a missing link in what we talk about energy and sustainable energy, we talk about wind turbine and solar; but not about barrages. What stage are we at in terms of development , who would you pay it, does it require government investment.

Answer

It's not a barrage, it's a lagoon. So, one of the things that this Severn Estuary report has said is that it shouldn't be a barrage. In some ways it's a shame, but it's just on the environmental side too sensitive. The most logical place for the barrage to be is in those areas that are environmentally sensitive. Cardiff Dock and Port and Bristol Port are dead against it. So that's why we're doing a lagoon. So our scheme is outside them.

The most important thing now is for the government to acknowledge that tidal range, which is this form as energy, as opposed to tidal stream, is different. The government needs say that it's part of the energy mix. That's what we need. We need Ed Miliband, basically, to say that tidal range should be part of the UK energy mix. I'm not quite sure why he hasn't done that. It's a bit of a mystery to me, because to my mind, it's a complete no-brainer.

People have been talking about harnessing the tidal energy of the Seven and the Bristol Channel for years and years and years. It's just, I think we're just trying to make it happen now because, there was always reasons that it didn't happen. I just think it's something that needs to happen now.

It's not just the Severn, in the Mersey there's actually quite far advanced plans to put a barrage across the Mersey. And that's got a lot of political support from the Mayor of Liverpool. We have got support, including from the MP, and from the local council. Whenever we talk to local people, they're always just saying; why hasn't it happened before? So, you know, there's no local opposition. The barriers are the government not saying that it's part of the energy mix, once that happens, then we think we can unlock financing.

Question

We've talked a lot about money and that being quite a driver, so in terms of the circular economy and reusing the material, what aside from money do you think is needed to encourage the circular economy as a culture and actually make it something that happens more and more growing forward.

Answer

I mean, we're very heartened by the fact that so many companies turned up to the event that we had last week (as mentioned in the lecture). It was, the Great Portland Estate, the Grosvenor Estate, British Land, a lot of big companies, they're actually doing it. You know, Canary Wharf, are starting to do it. As we've illustrated, it can actually save clients' money.

So, I think in terms of the government, what they could do is an obvious one, take VAT off retrofit. According to one of the Circular Economy Task Force members, who I was with in a Millenium Wheel capsule at the event, he was saying, Treasury is just dead against that. They just won't

even contemplate it, which seems crazy, crazy to me. But that's the reality. mean, I think that the government legislation has got to come in and help. But in terms of money, I think people have just got to change their mindset. As architects, instead of reaching for those virgin materials all the time, we need to think about how we can reuse materials. But also, we do need to create the market. So, you know, it's got to happen at the same time. You know, those materials have got to be available. It's not going to be easy, but we need to make it happen.

Question

Harking back to your previous answer, perhaps it would be fairer to add VAT to new buildings.

Related to your beautiful Cambridge Mosque, why was the structure built in Switzerland rather than in locally? Are there any similar buildings going on now?

Answer

Well, yes, we would have loved to have had a British company do it, but they simply don't exist. You know, this was done by a company called Bloomer Lehman and they have extraordinary skills in forming double curved structural members. The structural engineers did a lot of the work on the structure. In fact, we brought them on board early and they helped us to design it. This is one of the things that we did that with the London Eye as well.

if you're trying to do something unusual for the first time, it's best to talk to the people who are going to make it early on. And that's what we did. And interestingly, some of the members were constructed like in sandwiches. And some of the members were constructed like a Battenberg cake. the ones that took more force. It was very much engineered for the forces that it needed to take and to keep the members as small as possible. I wish we could have found a UK company, but there was only one company who could have done it really.

Question

I think that Minehead Scheme in the Severn is a brilliant concept and a well-developed elsewhere in the world. Could it be simplified in construction like the Normandy floating harbour, in worldwar II, by floating pre-fabricated caisons and then linking them on site.

How would the costs and electricity production compare with a Nuclear power station

Answer

That is the idea, the the caissons would be prefabricated in various locations around the Severn Estuary. So Port Talbot, which is desperately needing jobs, and Cardiff and Bristol, and there's a number of different places all around there. The idea is that they would be made and floated in place and then dropped down. And the way that the engineers have thought about it, and we have some fantastic engineers, is that you could have essentially 4 building sites. So it could be built from either end, from either side, and then from the middle also in two ways as well. So you're you've essentially got four different building sites all building at the same time, to optimise the build time. We've got to be able to source the grid connection and the rest of the turbine systems as well.

On our costings it is actually cheaper than current nuclear costs.

Question

Artificial intelligence, are you using it in your practice?

Answer

There are people in the office who are using AI, but I don't use it myself. We are not using it to design. We're are using it, selectively to refine reports and the like.

Question

if this lagoon It's so relatively easy and you've got the model for how to create it that can be transposed to other locations for example Galloway, It can be put where we need the electricity, down south instead of off the western coast of Scotland. Why, isn't Ed Miliband accelerating this concept?

The government is preaching a green agenda, although they've rather dropped it at the moment, but it really does to make so much sense. So why are we worrying about building another nuclear power station, when this is a cheaper option, will last longer, we've got the time, why the hell aren't we doing it?

Answer Well, I agree. We just need to get Ed Miliband here to answer that question.

Question

I read today that we've just hit a landmark of burning more coal in the world than ever before. I put it to you, this is all very nice this (green power in the UK), but it's not having an effect. Nobody worries about what's happening in little England. I'm sorry, other people are doing their thing and they don't care about this. That's the issue.

Answer

But, you know, China is building, you know, more solar panels than anywhere else in the world. I mean, you know, China has actually got the whole market of PV panels that they've kind of, they dominate it. And there's more PVs being built in America also than elsewhere. I mean, I think we shouldn't let that stop what we're doing. We just need to do everything that we can. We shouldn't just give up and just say everybody else is. But China's got, is in many ways further ahead than us in terms of green technology. So we need to catch up. And the UK is the windiest country in Europe and yet it was Denmark that that leapt ahead in doing wind turbines. We could have done that. You know, I just think we've just got to get on with it.

Question

A question about your mosque. You said it took 10 years from beginning to end. How do you keep yourself energised on a long project like that. Did it look anything like it does now compared to what we first sketched out?

Answer

Well, it was top start. I mean, that tends to be what happens is that, you know, we kind of, we worked on it obviously for the competition. And then actually the design did change quite a bit after the competition because initially we had masonry trees. and then they became timber trees. We got planning permission fairly quickly, unanimously, in two years, and then it stopped.

So, the project just pauses. So you're not working on it all the time through the whole 10 years. You know, it paused, it paused twice actually to, for them to get the money to build it.

Question

Not yet, no. there's a lot of there's a lot of work needs to be done. There's a lot of work that needs to be done, but there has a lot of work has been done by these engineers that we're working with. Huge amount of work has been done, but it needs the government to it needs the government to say that it should be part of the energy mix, and then we can move forward. And yeah, I mean, I've been working on it for three years. These engineers have been working on it for five, six years. Tthese things take time.

Question

I just wanted to coment on your masonry trees. That sounds absolutely appalling, so you're using that theory. Because you showed them about the walkway at Kew.

Answer

We did think about timber, but, you know, Coreten, you know, sort of in terms of long lasting in an exposed position like that, it just seemed to be more appropriate at that time. Yeah.

Final question from Peter Coleman

Okay, I'm going to take the opportunity to ask a final question. And you've had some fairly robust questions, Julia, and I'd just like to return a little bit to the positivity of your overall amount of work that you've done and the wonderful experiences that you've given the public. You've created places that allow the public to enjoy the natural environment and also to enjoy urban settings. I just like my question, I will get to it, is what have you learned creating this wonderful wealth of projects? What was one of the main things that you learned doing all that wonderful work? You mentioned a little while ago about working with the people who are going to make it, which is essentially, but what other nuggets of knowledge have you gathered during these fabulous projects?

Answer Well, I mean, one of the things I think I'd probably mentioned is that, you know, we like to work with engineers from the very early, early days, you know, on a project. In fact, we always have, in our design reviews, we have, we've traditionally, we've always had engineers, M&E engineers and structural engineers come and give us advice, not necessarily every week, but maybe once a month or something. So I think that's, you know, because we want the buildings to really be efficient and work well. And I think the other thing is actually consultation. And so that's one of the things we learnt with the London Eye, we did a lot of consultation with local community groups as well as kind of august societies and you know councils and you know that was a very valuable process was actually gaining local intelligence often and listening and you know really you know changing things if necessary. I think that's two of the things that we've learned is because architecture, it's a collaborative, it's teamwork.