

Episode 177

Redeveloping a brown field site for a contemporary home

The show notes: www.houseplanninghelp.com/177

Intro: Our interview today is with Ruth Butler from Butler + Butler Architects. She built a fantastic contemporary home on a brown field site, and we're going to find out about some of the challenges that come with redeveloping an urban plot like this.

However, I started by asking Ruth to tell me a little bit about her background.

Ruth: I'm an architect. I've been an architect for a long time. I'm married to an engineer so, you can imagine what table conversation is like in our house.

I used to be a partner up in London, and I've moved down to the south coast and setup my own business, which I've been doing for, about, the last six, seven years or so.

Part of the reason for moving down south was to be able to build my own home.

Ben: And we're sitting in that house at the moment.

I'm very keen in this episode to bring out how you have redeveloped the site, which is a brownfield site, and you've given it some great new life. So, both from the practical point of view and the design, getting the most out of it, I think there are lots of things we can talk about.

You mentioned you wanted to build a house. How did you start to go about this?

Ruth: We were looking for a site for a long time. We found one we thought we liked but couldn't get planning for something we wanted to live in. As a consequence, we kept looking and we found this rather unassuming brownfield site in the middle of Emsworth, that had some existing buildings on it that clearly would need to be demolished.

I could see that it was quite a special site actually, once you'd got used to the surroundings and got your head around knocking the buildings down. I think it had lots of promise.

So, we kept going with our original site, put a planning permission on it, took the money that we made from that site and basically rolled it into our own home build here, in Emsworth.

Ben: How did you know you were going to make money on that last one? Was it a self-build or was it more of a spec development?

Ruth: I was acting as a developer really. I tried to put my architect head away and I got planning permission for what used to be the back of somebody's garden. Obviously, the accrual of value between the back of somebody's garden and a building plot was enough to make a decent profit. Not enough to build this house, but certainly enough to bankroll the first few months of the build.

Ben: So, this plot you acquired. What was on it?

Ruth: It was the St. John's Ambulance headquarters building for the region, and a big, quite robust garage building, which used to house the St. John's ambulances.

Ben: Were there any constraints on this site?

Ruth: Well, it was hugely constrained, this site. We're surrounded by – I think I counted as many as thirteen different neighbours, at one point.

When we first met the neighbours, they were all rather excited about the idea of a new building on the site. Not excited in a good way, they had all gathered together to object to anything that might get put on this site.

So, I met them and we were able, over a period of time I would say, to allay their fears and come up with a design that worked for us, but also worked for them with regard to giving them privacy.

Ben: How did you do that? Could you explain the process? Did you knock on doors, call a meeting?

Ruth: I did a bit of everything really. I drank a lot of tea. We went around, I went around with my daughter, she was after school with me. I made it quite clear that we were a family and that we were looking to make a future here and we weren't developing the site.

I ate a lot of cake. We made a model. We took the model around and we were able to show people where they lived on the model, what the new house design would look like. We changed a few things, we moved walls, we chopped and changed the model a little bit to help them understand the perspective of the new development really.

Ben: What were their fears?

Ruth: They were only really worried about one thing and that was being overlooked. I think what I said then and what's proven since then is that we're not interested in looking at you, any more than you're interested in looking at us.

So, through good design, I knew that we would be able to overcome those issues. And since then, since the building's been up, everybody's happy that everybody's got enough privacy to live their own lives.

Ben: Was there any tricky element of clearing this site in the first place?

Ruth: It wasn't tricky so much. It was a classic brownfield site. It had a little bit of contamination because the St. John's ambulances used to sit on the site and they'd leaked oil over the years. So, we had to get rid of some contaminated ground.

We had the existing garage building which was quite a big structure. We knocked that down and we recycled all of the component parts into the build. We recycled the brickworks into the hardcore, we took a couple of the really big steel beams that were in that existing garage building and we used them to build our own garage at the end of the build.

So, in a way, I thought it was more of an opportunity than a constraint in that regard.

Ben: Do you think other people would've been scared off this site, or was there much competition?

Ruth: I think it was too small to be of interest to local developers. I think some local developers had tried to put two houses on this site and we wanted just the one. It's not even particularly large, the house itself. It's only about a hundred-and-fifty square metres. So, a three-cum-four bedroom house. So, it's too small a site for two houses. So, I think there wasn't that much competition from local developers.

Then, I think it did take a slightly brave soul to take it on because of the overlooking issues. It's in a tight little neck of the woods, it's surrounded by other houses, it was a brownfield so, as I said, it had a bit of contamination and some existing buildings. It was never going to be straight forward. But I think that's what my husband and I really enjoyed about it, the fact that it gave us something – the more constraints, the better the design has got to be to overcome them and we've always been interested in good design.

Ben: How did that design evolve?

Ruth: Well, it's hard to explain really, isn't it? As an architect, you spend a lot of time with a 2B pencil. It's a process of analysis. So, you analyse the site, you analyse your own brief for what you want, how you want to live – that's a really difficult question, knowing how you want to live. I think that was trickier than dealing with the site issues. And then, you're looking for a design that pulls the two together really, so that it complements the site and it complements the way you want to live.

Ben: And also in the centre here, you have a very nice courtyard, but that really leads on from the building, doesn't it? So, where you put the building and how much land you have left. There were balances there.

Ruth: Yes. Originally, I think we wanted to live in a single storey dwelling, but this site was clearly never going to be big enough for that and we needed the building height to shield some of the views from neighbours.

The house is an L-shape on the ground floor, and as you said, it encloses a walled courtyard garden. And that courtyard garden is entirely private. Because of the way we've arranged the accommodation around the edge of the site, you can't see other buildings from that garden, we can sit out there, we can have barbecued evening meals or whatever we want to do, without really feeling the presence of any neighbours.

Ben: As the architect, is there much iteration? Or did you get it right the first time?

Ruth: Well, if you asked my husband that question, he'd say I was impossible with endless options. But since you're not asking him, you're asking me, then I would say I took a normal and sensible approach to designing and every iteration made it better.

Ben: When did you know this is it, this is what you were going to build?

Ruth: I think if you've been around the design issues a couple of times, then there comes a point where you think this is the perfect answer to this site and it perfectly answers the way I want to live inside this building and in the landscape that this building creates.

So, for me I suppose, as an architect, that's a fairly instinctive moment where you just know that it isn't going to get any better than that.

Ben: How are you going to build this?

Ruth: We were really interested in a fast build. The whole planning process had maybe taken a year beforehand. We needed to sell where we were living in order to build, so we knew we were going to be renting and we didn't want to waste too much money on rent. So, it was quite important to us to build fast.

So, I was keen on a prefabricated structure and we chose a cross-laminate timber structure, CLT for short, which was prefabricated in Austria. We went over as a family and visited the factory and saw our house coming out of the factory, which was quite exciting, and that went up in four days. We were weather-tight by the end of those four days.

However, that's not to say the build was that quick. It took seven months in total to do the build. A lot of the interior fit-out items are the same whether you prefabricate the structure or not. And certainly, the external cladding took a bit longer than we thought it was going to take.

Ben: You mentioned planning there, and it taking a year. You had planning permission on this when you bought it, didn't you? So, what was the struggle?

Ruth: It wasn't planning that took the year, it was the preparation for planning, if that's not too fine a consideration.

The planning authority were very supportive but getting the neighbours on board and getting the design right, ready to put the planning application in, that's what took probably a year.

So, it was overlapping design phases, talking to neighbours and then we thought we've got something that we can put in for planning.

The planning was extremely smooth. They were very supportive of a piece of what's very contemporary architecture in a very

traditional setting. There were no problems or delays through planning. It was a standard period of time for that.

Ben: In terms of gathering together a team, was this easy for you because you know the area?

Ruth: Well, I was down from London so I wasn't that familiar with local design teams. So, my design team was somewhat more London-based, my structural engineer was London based.

Between my husband and me though, I have to say, we had a fair amount of the design team covered, just with the skills that we have.

So, the only other people who we needed was a structural engineer, who were Price and Myers; and a landscape architect called John Brooks, who runs a very nice local practice down on the south coast and is famous for writing a book called The Small Garden, and I thought that's an entirely appropriate person to appoint to design my courtyard garden.

Ben: Is that something you step back from? I've wondered this on my own build sometimes, that I have employed an architect. But what's it like when you have to work with an interior designer or a landscape gardener? How much are you delegating? How much is you just saying what you want or briefing them?

Ruth: I gave John Brooks a fairly clear brief, because I think as an architect, I realised what I want from a client is just a clear brief really. It's amazing how often clients don't have a clear brief.

Ben: What do you like from a clear brief then? What does that mean?

Ruth: Well, I don't want somebody to have guessed what the solution is to the problem. So, I think I want them to know for themselves what they're looking to achieve, functional requirements, but I don't want people to have double-guessed what the design might look like. Because in effect, that's my job and also, it can constrain your thinking as a client.

So, what I really enjoyed about John Brooks' design, is that I had no particular desire to control the landscape design at all. I gave him freedom to design it the way he wanted to. But I had been to see some of his work and I had made some assumptions in my mind as to how I thought he might tackle it and he entirely surprised me and came up with a design that took my breath away really.

So, I was really pleased that I'd entrusted that to him and he's certainly come out with an excellent landscape.

Ben: At what stage did you get him doing that?

Ruth: I did it after we had planning for the building and whilst we were on site. And for him, it was quite important to see the building going up. So, he needed to feel the site and to feel the spaces that he was designing. He found that very useful. So, he came to site while we were building the house.

But I needed him to have completed his design work before the end of the build because there's a number of interface details that needed to be sorted out between the landscape and the building, which you need to know before you've gone too far down the line really.

Ben: Were there any key challenges that you had during the build, or using this system did it just become quite simple, just slotted all together?

Ruth: It was a remarkably straightforward build and I was really blessed by the fact that the main contractor, a company called Nicholas Coppin Limited, their company came out of a joinery workshop so, they were all tradespeople and staff that were familiar with timber, and this is a very timber building. They were delightful to work with and they'd mock things up in their workshop and things. So, that was remarkably easy.

We had a near miss with the windows. I won't name names but we'd paid a window supplier a fairly hefty deposit and they promptly went bust. Thankfully – and I don't know how we were this lucky really – we got our deposit back and we were then able to start again on the windows and find someone else to supply them. But I can see circumstances in which we wouldn't maybe have got away with that.

Ben: You got it back from them?

Ruth: From them, on the cusp of going into liquidation. So, we didn't have to deal with anybody except them.

Ben: You've already mentioned that this is an L-shaped Passivhaus. Did that pose you any problems?

Ruth: I think when we started the build, we knew we wanted a low energy build, but we knew that this site was going to demand a building that wasn't particularly compact.

We were interested in Passivhaus, and at the time we weren't entirely convinced we would go the Passivhaus route.

It has been challenging, I think, from a Passivhaus perspective, because it has broken a number of their form factor rules. I think we're at least double the form factor that we should be. And also, given that we've got some single storey elements, I was really keen to use roof lights to get daylight down into the interior, and that again is slightly frowned upon in Passivhaus world.

However, as a designer, we were absolutely convinced that we could make it Passivhaus certified and we've added more insulation to the walls and the roofs than we might otherwise have had to do. But we've achieved the Passivhaus certification and in the scheme of things, insulation's relatively cost effective.

So, I think the L-shape was the right answer for the site and Passivhaus is the right answer for energy conservation.

Ben: And you've made it work, haven't you? It doesn't really matter if you've got a bit more upfront effort, you've made it work so that now, you could've had a more compact form but you probably would've had the overlooking with that.

Ruth: Yes, we would've done. And I think it's really important that Passivhaus, you can prove that you can do good bespoke site-sensitive designs and still meet the Passivhaus standard. I don't want to see a world full of very square, boxy solutions to Passivhaus designs, I want to see buildings that respond to their sites.

Ben: With Passivhaus as well, you've got to be careful of overheating and it's quite exciting for me to see some new shading methods here. So, tried and tested, can you explain what we've got, whether they work and whether you've ever actually taken them away to see what would happen?

Ruth: Ah, well some of our shading devices gets regularly taken away because what we're looking at here is we're looking into the courtyard. Over the top of the courtyard is a sailcloth and that is there entirely for shading the ground floor windows.

We're slightly over-glazed in Passivhaus terms. We wanted big windows and doors because we want to be able to have good indoor-outdoor flow. So, the sailcloth that's hanging from the first floor roof, sloping down over our courtyard, is providing the solar shading for the ground floor interior.

It's a sort of technology and a kit of parts that my husband and I are very familiar with, because we're both sailors. So, we put it up when the sun starts to shine, around about Easter time, we take it down in the autumn. In the winter time, of course, you want the solar heat gains to heat the house. And also, the bedrooms have a bit of solar protection with some eyebrow features on the walls.

Ben: I noticed too that you have a Passivhaus cat-flap. I don't think I've seen this before. How did you research it? Does it work well? Is it the most expensive cat-flap you've ever bought?

Ruth: It's more expensive than the cat, that's for sure.

When you're building a Passivhaus, you do end up unfortunately buying a lot of products from Germany and its neighbouring countries. That is called a pet door, I'm pretty sure it's German or Austrian, and it's a super-insulated cat-flap that is operated on the ID chip in the cat. So, it's specific. You can programme it to your cat.

It cost about eighteen-hundred pounds installed. It's ridiculous. But the problem with Passivhauses and pets is you can't build an airtight, thermally insulated Passivhaus and then put an uncontrolled hole through it for your pet.

So, we did wonder about the relative value of the cat and the cat-flap along the way but I think we're happy with the decision.

Ben: The design internally, too, is that you or have you called on someone else's services?

Ruth: Oh, no. I was definitely in control of the interior design myself. And that's because where I wanted to create the living spaces that we knew as a family we would want, and also some flexibility for the future as well.

So, the L-shape, as you come in through the front door, you enter straight into the kitchen. There's no need in Passivhauses for any entrance halls, lobbies or anything like that, that would traditionally be associated with draft-proofing your house. So, you can think again about how you come into your house.

So, we come into the kitchen and then the L-shape, either end of the L are the dining room and living room.

Ben: And the actual design itself, is that just a flair that you have? It fits the building very much.

Ruth: It's a matter of designing the inside and the outside in tandem, as all architects will tell you.

Ben: I don't think all architects get it right though, actually.

Ruth: Well, maybe it's easier knowing who it is you're designing for and maybe the role of architect and client in one person, maybe that helped that along a little bit.

Ben: As we get towards the end, are there any things that you've found useful on this journey, that you've learnt?

Ruth: I've learnt lots. If I was going to do it again, there are some technical details I would change, such as the insulated slab. I would go for a prefabricated insulated slab which are now available, and I don't think they were as available when we did this house. Or maybe my awareness wasn't as well advanced as it is now.

The main things to get right with the build are getting the team right in the first instance. So, get a contractor on board you know you can trust. This contractor hadn't done Passivhaus before, then again neither had we. That's not important. What's important is whether somebody's attitude is right or not. And that's the same for the design team.

If I was doing it again, I would put cross-ventilation in the bedrooms. At the moment, there's an opening window in the bedrooms, as you'd expect, but it's single-sided ventilation. Passivhauses, the challenge is always to keep the house cool. There's never a problem with heating in the winter. They're always warm houses, but the real design challenge is to keep them cool in the summer time. And our bedrooms are slightly warmer than I'd like them to be.

So, in the future, I think we'll be working towards getting some cross-ventilation in our own bedrooms, and certainly with other passivhauses that I'm designing at the moment, I wouldn't do it again without achieving that in a new design.

Ben: Do you think actually flipping the layout – I know it obviously depends on where you are, but having that upside-down house? Because you do have that temperature differential a little bit; it's not massive.

Ruth: Yes, I think it does depend on the site. Certainly, some sites that have wonderful views from the first floor and I think then it's a very good reason to have an upside-down house.

Here, we wanted the flow into the courtyard garden, because of the way we live. So, it didn't suit us. But from a temperature differential, yes, that would be a benefit as well, to have the bedrooms downstairs where it's cooler.

Ben: Finally, just reflecting on it all, living here, perhaps feedback from neighbours, how is it looking back at this self-build?

Ruth: It was quite a ride really and it was very exciting. I think we miss the excitement of building our own house. Not that I'd want to do it again, because I'm really happy living here. But we really did enjoy the process of building our own house.

The neighbours have been great. We've formed some very nice relationships with the local neighbours.

The house, we've discovered, is an excellent party house. We've got some really big sliding doors, a lovely garden, and it suits some very big parties. So, partying into the future.

Ben: Ruth, thank you very much.

Ruth: Thank you.