Transcript of House Planning Help episode 362

Ben Adam-Smith
This is House Planning Help - episode 362. Hello, I'm Ben Adam-Smith and this is the podcast for you if you're interested in self build or retrofit. I'm exploring what houses we should be building in the 21st century and trying to break down the major roadblocks that may get in our way. Coming up in this session my guests are Clare and Ross Booth from Coldwells Build in Aberdeenshire. What would it be like to get a Passivhaus the easy way? They've been working on a range of contemporary, prefabricated, turnkey Passive House designs, so you could pick one and have it manufactured in their workshop. That does sound easy. You know the costs up front. So we'll be finding out more about that.

Ben Adam-Smith
So there is a slight backdrop going on here. I've kept a little bit quiet about the Scottish Passivhaus Equivalent legislation that has been proposed over the last few months. It's fantastic it's got this far, but I suppose there's always a slightly cynical side of me that just is worried. I'd rather report that it's all through and thank goodness they're embracing Passivhaus. But I think we need to pause for a moment and understand that we're at the point in the road where, although a lot of good work has been done, both by the practitioners in Scotland, lots of good certified Passivhaus examples, the Passivhaus Trust, again, leading the way. Brilliant, brilliant, brilliant, but there are concerns that what might get passed will not be quite up to scratch. So there is a consultation underway at the moment that is asking for our opinions. Anyone can do this, and we need as much support as possible to try and push this through. So we're using accurate tools, that we have absolute energy targets, quality assurance, a good timeline, all these sorts of things. The Passivhaus Trust has got it all sorted and will explain everything. So I'll put a link in the show notes. Houseplanninghelp.com/362, we need your help on this one.

Ben Adam-Smith
Let's get to our featured interview with Clare and Ross Booth from Coldwells Build. We're going to explore an exciting new project that they're looking to scale up. So we'll dig into the details. I started by asking Ross about his background and how the business got going.

Ross Booth
I left school at 16 and got an apprenticeship as a joiner. After my apprenticeship, I spent another year working on construction sites in the UK before moving over to Australia. I was working in Sydney for around six years, that's where I met Clare, and then we decided to move to London. Clare's background is in journalism, so she wanted to get some experience working in London with some of the news stations there. So we headed back there and whilst we were there, my parents were wanting to build a house back up in Scotland, so I moved back up to build that for them. From there, I got asked to do a few small projects for other people, and work just picked up from there. And I just thought, Oh, well, I'll try and give it a go back here, set up our small business, and a kind of sole trader for a couple of years before becoming a limited company in 2016 and that's where Clare stepped in and started giving us a hand with the bookkeeping side of things, but then more importantly the marketing, and it's just grown from there.

Clare Booth
There's quite a lot of crossovers in the business world with that as well. You learn about marketing and learning about how to promote a small business, and writing blog articles and giving people good advice. So all of that, I think that skillset has actually really helped and translated into helping Ross run and grow this construction company. So together, we always say it's a really good team, isn't it.

Ben Adam-Smith
What about the location? I mean, this is quite a change from Sydney or London. How are you finding things, Clare?

Clare Booth
Initially, the weather took some getting used to but now I'm used to it, and I have to say, I love it. I think Scotland, there is no prettier place, as far as I'm concerned in the world. And I quite like the fact that there are seasons here, because back home, where I'm from in Australia, I come from the tropics, so North Queensland, and we really only get two seasons: a wet season and a dry season. And so here I get to experience all seasons round.

Ross Booth
So it's wet season all year round here!

Ben Adam-Smith
I thought it was four seasons in one day, that was one of the ones that I've heard. Okay, so just looking at the construction journey, then, Ross, you've gradually built more and more efficient houses. So maybe you could fill in that part of the journey to where you've got to today, or do we already need to bring in this Scottish Passivhaus equivalent bit of legislation that is being mulled over at the moment?

Ross Booth
I think, in terms of us learning about energy efficiency. Me personally, you get trained as a joiner. You get told how a house should be built. Things are added into the plans by architects, and there's not really anyone there telling you why you're doing a specific thing, like installing an airtightness membrane. And it wasn't until we did our Passivhaus training that a lot of these things we've been doing for quite a few years now, you realise, oh, that's why we're doing this. And oh, that's how we can improve on, you know, taping your windows, that insulation should be installed a bit better for perimeter insulation to prevent thermal bridging and these sorts of things. And it's not anything that's taught in the construction industry unless you proactively go out and seek the training on it. So doing the Passivhaus training has just helped us, even on the one off builds that we're doing at the moment, that aren't being built to the Passivhaus standard, but you can implement those lessons that you learned in your training into everyday building.

Ben Adam-Smith
So the Passivhaus training, who was it who decided to do this?

Ross Booth

Well, Clare can take credit for that. She's did a bit of networking, and just got in touch with an architect, actually, who said that the government was doing some free training, and she signed us and the rest of the team up to it. And me, as stuck in our way, started joiner was a bit skeptical about it, but after the training, me and the whole team were completely sold on Passivhaus. So it just goes to show, if it can change me, it can change anyone.

Ben Adam-Smith
So how are things feeling in Scotland? You've got this legislation that hopefully will go through undiluted and unchanged, but are more and more people aware of this? Or is it still very much you're just being told, as you were in those early days when you're on site? This is what you've got to do, this is the job. This is how you do it, and then you just get on with it. That's the way you learn on sites.

Ross Booth
That's very much the way of it, actually. As an example, before I went to Australia, I'd never heard of an airtightness membrane, because nobody used to install them. It wasn't a thing. And then when I came back from Australia, it was in all the plans. And I was like, what the hell is this for? You sort of think, what's the purpose of it? We've never needed it before. I guess that's probably why there's a bit of a bit of a performance gap, because you know you're being told to put things in, and you just don't know why you're doing or you don't know if you're doing it right, you don't know if you're doing it wrong. You're going off what other tradesmen say, and nobody's had any training in it.

Clare Booth
I do think there is more and more awareness, though, of Passivhaus, and I think it's come to the forefront in a lot of people's minds, just the general public's minds. More recently, we've seen the energy price rises. Increasingly clients who get in touch with us are saying energy efficiency is now one of their top priorities when they want to build a home. And to quote a gentleman that got in touch with us, I mean, he said he felt almost quite anxious watching the meter tick up and to see, you know, how much he's spending on his heating bills every single day, and he said he doesn't want his hard-earned savings and his pensions just to be going on heating bills. So I think more and more people are becoming aware of the need and the importance of building energy-efficient homes. So I think from the general public's view, it's becoming more and more well known now.

Ben Adam-Smith
Well, I always remember, in my very early days of making this podcast, that Ted Stevens, who was then the chair of NaCSBA, was saying to me, well, there are pretty much two ways that things are going to change. One is that we just demand it, we say we want better standards, we've heard of this, we want this. And then the flip side is the regulation that if standards are incrementally increased, then you've obviously got to meet those. So those two things.

So what are you doing, trying to make Passivhaus homes, maybe turnkey solutions for people. How has that come about? And where are you at with it?

Clare Booth

Our business, predominantly bread and butter, has been building custom, bespoke, one-off homes for private clients and self-builders. And doing that, we are with clients, day in, day out, or certainly Ross is, being on the job, living and breathing it with them. We get to see the highs of all the projects. But we also see the challenges as well and those can tend to be going over budget in the design phase and going to builders to getting quotes, the construction costs being more than what they hope to spend, than having to go back to the drawing board, cutting out a few bells and whistles, and then going back to builders again to get quotes.

Then on top of that, there's often decision fatigue. Clients express to us that, you know, the amount of decisions that they need to make per project, and we've roughly estimated it to be around 3000 per project, and that's, you know, decisions on materials, colours, layout decisions. So that can be quite overwhelming for clients as well.

And then there's also the unpredictability of like the building itself. So being on site, you know, if you've ever watched an episode of Grand Designs, you know, there's bad weather delays, there are fed up neighbours, making noise complaints, all those sorts of things.

So we heard all of these things from our clients, and we thought, we need to try and make it simpler and easier for people to build and so to remove these obstacles, we decided it would be a good idea to create our own collection of pre-designed homes, and we had some key goals in mind when we were thinking about doing this. First, we wanted to have the designs set to a fixed price, didn't we, to give people cost certainty, so there was none of that having to go back to the drawing board, to cut out bits and pieces here, people just knew straightaway what they were getting for their money.

We wanted to eliminate that decision fatigue. So we thought we needed to curate a set amount of materials, colour choices, so that people weren't overwhelmed. And then we wanted to use effectively, modern methods of construction and prefabricate most of the house off site so that you're not getting those weather delays, you're not disrupting neighbours, you're cutting out all of that. So those were the key things that we wanted.

And then it was around 2021 that we were thinking about all these things and in 2021 there was the COP26 global climate change summit, and that was being held in Glasgow at that time. And there were a few satellite events around that. And I started to learn more and more about the construction industry's impact on climate change. For example, most homes are still relying on oil and gas, that's contributing to nearly a fifth of the UK's carbon emissions. We've also got some of the worst insulated homes in Europe as well. So heat's escaping through our walls, our roof, our floors as soon as we switch on our radiators.

And then, of course, there's the performance gap. That is when a home is designed on paper to be energy efficient, but in reality, it's real-life performance tells a very different story. And I think the Passivhaus Trust has done some reporting around this, and they found that the performance gap is currently sitting at 60%, so a home could be using up to 60% more energy than it was actually designed to do.

So, as we were planning our homes, we were thinking about all these things, and we thought we need to build better. We need to try and solve some of these problems and just build better. And that led us to start looking for different ways to build and through that we ended up coming to Passivhaus. So in a not so nutshell, that's really it!

Ben Adam-Smith
Ross, I mean, Clare has done a lot of the thinking here. I know how she's ended up here, but I also know what the challenge is. I've seen facilities in Scotland trying to do this, and I know, even though they're a long way down the road, how hard it is. So what challenges do you see, or are you trying to keep things as simple as possible, so that you're not going to run into too many of those?

Ross Booth
It's been a long time of designing our own construction system with John Gilbert Architecture. So we've tried loads of different wall systems, and in the end, we've sort of landed, well, we wanted, what we wanted to do was try and develop a construction system that wasn't too dissimilar to how most of the tradesmen in the area build already. We've opted for a twin wall system, essentially, sort of built in small, pre-insulated sections. So, you've still got your standard six inch timber frame that the guys are used to installing up here with an add on internal four by two frame as well. So it's not going to involve too much extra training for the guys doing any of the installation. So that's been the main sort of challenge, is just how are we going to do it, and how are we going to keep it simple, and how can we pre-fabricate them as far as we possibly can in the workshop, before being delivered to site. I mean it sounds tricky and it sounds complicated but it's a lot simpler than a lot of the projects that we've actually been building.

Ben Adam-Smith
Are you looking for a particular person for this? Because I think this is one of the challenges that custom build has come up against is that we either want everything bespoke or we want to go and buy a property that’s already been built. And there’s not that much in between. We haven’t developed that mindset. So I know you have your different designs here and we probably don’t realise what a bargain they are, and we might come in and want to change things!

Ross Booth
If someone wants to customise one of our pre-designed homes, that's a completely different service. That's a custom design because we are going back to the drawing board a little bit. We're happy to make any internal layout changes, but when it starts involving structural changes, then that's not one of our pre-designed homes then. So there's a set of rules which we need to follow to make sure this is streamlined and repeatable and re-designing the entire house from scratch isn't one of them.

Ben Adam-Smith
What you don't want to do that?! So who is that client? Who do you think it is? Have you identified who these people might be, or is it actually going to come around from land? I don't know. That could be another way. I've seen other outfits almost get that side of things sorted first, and then try and sell the idea to people. How are you going to bring it to your customers, or get your customers to the product?

Clare Booth
So the idea is that the clients, when they come to us, will have land, and we will then be able to work with them in order to get planning permission and a building warrant to build on their land. So that is one of the stipulations that we have, is that they need to have land. In terms of the clients that we're seeing that's coming to us, it's generally retired people or who are coming up to retirement that really just want to make sure they're getting bang for their buck when they get a house that's going to perform as it's being designed. So that's really the typical client we're seeing at the moment. Although that's not to say… Our very first clients… we've currently got a Passivhaus going through planning permission in rural Aberdeenshire, and they're a young couple with a baby, and they very much wanted Passivhaus, didn't they? Because they were aware of it, they knew the benefits of it, and they wanted to bring up their young family in a Passivhaus. So it is a bit of a mixed bag in these early days, so we'll have to wait and see, really.

Ben Adam-Smith
And can you explain a little bit about the process? *"Hello, I'm a new customer here, I like the look of this, tell me a bit more."*

Ross Booth
Yeah, so there's obviously a bit of a process upon first getting in touch. There are a few requirements that you'll need to move on to the next stage, such as, having a plot. You know, you need to choose one of the houses. Does it work for your budget? XYZ, before moving on to a concept agreement. So that's where the client will have chosen a house. If they want to make any internal layout changes that can be done, providing there's no structural changes. We'll prepare a site plan and effectively get it prepared for planning permission. If everyone's happy, we'll do a cost check, make sure it's within budget before submitting it to planning. Once planning has been approved, we'll then go into a preliminary building agreement. We can then start looking at the internal finishes. We can have your kitchen pre-designed, your floor finishes can be selected, driveway finishes. We can get the cost to where it's as accurate as it can possibly be. We'll then submit for building warrant, or architects will. Once that's been approved, we can then present to the client, this was your brief, this was your budget. We've hopefully come in just underneath the budget, and you've got a building warrant ready to go, so if you're happy, you can sign a building contract, and then we'll get the house built.

Ben Adam-Smith
Have we nailed down costs? So that really, at that stage, when you pull the trigger, you know what the costs are at all?

Ross Booth
Yeah, absolutely. If there's any changes along the way that is going to impact on cost, the client will be notified. So if they've made a request for, say for example, I'd like an extra 10 square metres of paving externally, they'll know what the additional cost is before it's submitted for a building warrant.

Ben Adam-Smith
And then how does the process look from there? How long is it going to take to realise? Is there a bit of a queue forming in the workshop?

Ross Booth
Well, I think we would like to start prefabricating the home within three months of having a contract signed, and then, whilst we are prefabricating, we can have our groundworks team on site, preparing foundations, substructure, floor slab ready for the timber frame when it arrives. Once, the timber frame's delivered to site, we can have it wind, watertight and airtight within days, really. The cladding will be pre-installed, the wall panels and roof panels will be pre-insulated. The airtightness membranes will be pre fitted, and all the joints will need to be taped on site. So, it's quite a quick turnaround from arriving on site.

Ben Adam-Smith
Are we left them with a finished shell that we're going to have to fit out ourselves? Or how does that bit work?

Ross Booth
If you live in Aberdeenshire and you'd like a turnkey house, we can do that, but if you live outside of Aberdeenshire, we can do what we call a You Build service. So just as you said, it'll be complete externally, and then you can use your own local tradesmen to complete the internals.

Ben Adam-Smith
And how does it come together on site? Is this going to be, you know, just a matter of days?

Ross Booth
Yeah, so everything is craned into position. So the only things that would add extra time is the roof finish. So if you've chosen to go for a slated roof, you would probably need to get a local roof slater to do that. We can't really offer that, if it's outside of Aberdeenshire. If it's a standing seam metal roof we can fit that, and we can fit that in a couple of days. So, within a couple of weeks, your home's complete externally.

Ben Adam-Smith
We talked a little bit about cost, but what are the costs and how is it nailed down? Is it per home or per square metre? Just to give us a guide.

Clare Booth
So we are, we're going to be advertising prices per home, and we have had a quantity surveyor, our quantity surveyor that works with us calculate the average price of one of the homes, and that's kind of been based on having a level site. To give you an example, one of our houses, which is a four bedroom bungalow, we think the turnkey price for that, the average turnkey price for that, is currently sitting at around £430,000. And then for the You Build service, which Ross spoke about. So that gives you a fully complete external shell of the building. The average price for that is coming in at around £220,000. This is for a fully certified Passivhaus, and that is something that we really want to do. It's core to our offering is that we want to make these certified homes for people, so that they're guaranteed that they're going to meet the Passivhaus standard.

Ben Adam-Smith
You've been working with John Gilbert Architects, which I know quite well. I've visited them before and know a few people from the practice. How did that relationship come about? And what do they see as the challenges for you and how you interact together?

Clare Booth
So the relationship there came about because we sent all of our joiners and builders, Ross included, so 12 of the guys down to BEST at Glasgow. So BEST, for those who don't know, it's this incredible facility, and it's really all about decarbonising the built environment, so it's all about upskilling and educating people in the construction industry. So we sent all of our guys down to BEST to complete their Passivhaus tradesperson training. And on that course was Rupert Daley. He was delivering the training, and he is an architect, a Passivhaus designer with John Gilbert Architects.

So it was around that time 2021 again, we had this idea of having a collection of homes to try and solve all those problems that we spoke about earlier. And meeting with Rupert, we started to speak to him about this idea, and we thought, can we somehow incorporate Passivhaus into that? Can Passivhaus be repeatable, pre-designed? Because we're very conscious that Passivhaus was very site specific. It's a site specific standard so how would we get around that? And so we teamed up with Rupert, who said, yeah, absolutely, we can do that, it's just going to take a little bit of tweaking. And so we worked with him over the course of the last two and a half years to create, well, six designs, is what we've ended up with in total. And the way we've kind of got around that issue with Passivhaus being a very site specific design is... And this is probably where you should take over.

Ross Booth
The reason our houses will work on any site in Scotland is that we've over-egged the amount of insulation that's in the panel, so we're not so reliant on solar gains. So we've got quite a chunky wall and roof system. And Rupert has tested the house on PHPP on a coastal exposed site in the North East of Scotland, and we've tried it in every orientation, and it's passed. It's got its Passivhaus certification on every orientation. So that's how we know it'll work.

Ben Adam-Smith
I like it, it sounds good. We must maybe reconnect again a little while down the road, when we've got some case studies. And if I could help you, or wave a magic wand, you know, where are you at with the business? What are the next steps?

Clare Booth
Next steps for us. We've got the launch coming up of the Passivhaus collection, and that's going to be early November, we're currently aiming for. So we'd like to get them out into the public and just get people interested. We have already had quite a lot of interest, which has been fantastic. So we've had to kind of just tell people, just wait. We've got a waiting list at the moment because we are very much set up now for it, aren't we? It's been one of these organic growth things that we've had to just slowly develop over time as and when we could, but we've got the workshop now where we're going to be prefabricating everything. We're all set up with that. Ross has done the construction system. He’s worked with Rupert on that. We've got the designs. We're just about ready to go, which is really

exciting, because for us, it's the culmination of almost three years worth of work and making all those decisions behind the scenes.

Ben Adam-Smith
Have you got a tricky point coming up then when you're going to be working on the business that's going through, but also you're needed back at the workshop? Have you thought that one through?

Ross Booth
We're quite a small company, so we're never going to overstretch ourselves. So if it gets to a stage where we think the quality of our work is going to start decreasing because we've, you know, we've overloaded ourselves, then we just need to scale back. We're not going to flick a switch and then go from building our custom homes to building nothing but Passivhaus homes. We've got a lot of strong relationships with other architects as well that we still do work for and will continue to do work with. I think it's just going to naturally evolve. Nobody can say. We don't know how much demand we're going to get for it. We could be flooded with enquiries!

Ben Adam-Smith
How close are you to the first customers? Or are you actually not taking the first customers? How's it working there?

Clare Booth
We already have our first customers. So we wanted to try and get one up and running, really, didn't we? So we do have already one customer who's local to us, and that's currently going through planning permission. Come November, we'll be more ready and able to start accepting customers, but initially we don't want to, as Ross said, overload ourselves, so we will be limiting the amount that we will be able to do at first. So we've said six per year right now, that's what our team could cope with at this point in time. So six per year initially, and then after that, it might just be a gentle scale up, and we'll see where we go from there. But right now, we're just going to keep it limited, just so that we can maintain that quality. We can make sure we've got the processes correct, and that we can iron out any teething issues or any challenges that may crop up along the way, because we're not naive to think that they won't, because they certainly will. So we've just got to try and keep it small, so that we can stay on top of it really.

Ben Adam-Smith
Now I want to move on and talk more generally about the Scottish Passivhaus Equivalent standard that is being proposed. But is there anything else you want to mention about your business or about your journey so far?

Clare Booth
I don't think so. I think we're just genuinely excited about it. I think we, for us, it would be great, actually, if more tradespeople would come on board and go and do their Passivhaus training at best, because it opened our eyes, and it actually challenged us to think about things a bit differently and do things differently. So we would love others to do the same.

Ross Booth
Yeah, you actually get a lot more satisfaction out of building that way, when you know why you're doing things that way, you know, rather than just hoping it's right.

Ben Adam-Smith
Yeah, and you get the finished buildings. I live in a Passivhaus and they're just better. You don't want to go back the other way. So I think you're on the right track there. Now I want to put this all into context, because you're, obviously, you're on this journey, and it's fascinating, and I wish you well, and I hope it all goes really, really well. But the Scottish Passivhaus Equivalent standard that they're talking about, and I really hope, doesn't get watered down by politicians, which is probably, I think, a very valid fear. So what would it mean? Let's say we did get everything we wanted. What would that mean to Scotland?

Clare Booth
Essentially, better quality housing, that's what it would mean. I mean, you're correct, it's not yet known how this is going to work in practice, but we do know that the new legislation aims to develop a building standard that is similar to Passivhaus. So it's hoped that Scotland's homes of the future will deliver equivalent performance for health, comfort, low heating bills, and that's obviously best achieved by adopting the five key Passivhaus principles which are your higher quality and far greater levels in insulation, your high performance triple-glazed windows, your airtight construction, your ventilation system with heat recovery and having no thermal bridges, which is stopping your condensation, your mould, etc. If we can incorporate all of those things into Scotland's homes of the future, then it's going to be a huge shift.

And the people that get to live in homes like this, I think we're just so used to some somehow living with uncomfortable homes in the UK, you're used to having that cold draught blowing in through a crack in the wall or anywhere. So the comfort side of things will be amazing. And then the health benefits of it as well, with having that fresh air constantly. So I think there are just so many benefits, really. It will just mean, essentially, better quality housing in Scotland.

Ben Adam-Smith
And Ross, you talked earlier on about how the trades, you know, maybe they don't know why they're doing a lot of these things. Are they aware of this consultation that's going on at the moment?

Ross Booth
I don't think so. No, I just think a lot of tradesmen, wake up, go to work, come back home, it's just a job. I think it's probably down to employers, maybe explaining a little bit more about it, and maybe upskilling themselves, a bit more education.

Clare Booth
Scotland is really trying to upskill, isn't it? And I think having that facility at BEST down near Glasgow. That is doing such a wonderful job in providing that training for trades and construction workers. So I think that is solving a big, a big kind of problem already in trying to upskill people in Passivhaus, isn't it.

Ben Adam-Smith
If you're listening to this podcast at the time it's released… you know, we try and make these podcasts evergreen, and we've started with your story here and your ambition into Passivhaus on purpose. But if you're listening to this now, as it goes out, please take the time to do the consultation, and we really hope that this will make a difference, because, as we've already talked about, it will just lead to better houses. Well, thank you so much for your time today. Really appreciate it.

Clare Booth
Great. Thank you. Ben.

Ben Adam-Smith
Head online to take a look at the show notes that accompany this session - houseplanninghelp.com/362 - where you can review the key points once again, in our summary. We've got some photos as well of some of their past projects. You can have a look at what these contemporary homes would be like. Perhaps you want to find out more about Coldwells Build? Well, we will link you to their website. And importantly, as we mentioned the Scottish Passivhaus Equivalent legislation. If you can help in that consultation, please do. There's a link in the show notes - houseplanninghelp.com/362.

Ben Adam-Smith
My call to action is to check out The Hub, and this is the membership community that I run alongside House Planning Help, designed to help you further. If you're in the early days of looking into building your own house or retrofitting, then we've got so much stuff to dig into, whether it's live training sessions with our guest experts, our courses, our in-depth video case studies, because we've been filming on different projects, we just want to give you more opportunity to research. At the beginning of a project it's such a fun stage, as well. So if we can help, maybe you want to chat to me or one of the experts that we bring on from time to time, come and find out more at houseplanninghelp.com/join.

Ben Adam-Smith
That's it. Thanks so much for listening. The House Planning Help podcast is produced by Regen Media - content that matters.