

Episode 116

How do you find a good builder of low energy homes? – with Mike Whitfield of Mike Whitfield Construction

The show notes: www.houseplanninghelp.com/116

Intro: When researching good builders that people would recommend, Andy Simmonds provided the following glowing reference of Mike Whitfield, from Mike Whitfield Construction:

"He has the attitude of an old master builder. He's forward looking, he uses PHPP, he uses and refines CarbonLite guidance, he's equitable, fair. He and his team track costs of labour on site to the nearest 15 minutes, apparently to refine the accuracy of their job costing."

Mike is based in Herefordshire, and we were keen to find out what he does on a day-to-day basis, and how we might find high calibre builders elsewhere in the country.

I started by asking Mike how he had become interested in working in this area.

Mike: Well I suppose in the late '80s I went to work for a builder who did, I can't even remember what we used to call it, but sort of natural building. It was before we knew about energy efficiency but we'd try and use a lot of reclaimed materials, natural products.

And from that I gradually moved into energy efficiency, really when I did a job in '96, which was 20 years ago, which had an energy consultant on it. I realised that maybe 15 years before that I had worked on a job with a degree of energy efficiency but I hadn't really realised the implications of it all. And once I did this job in '96, it sort of reawakened my interest in it.

And we started then on an energy efficient journey and we sort of improved every year really. And then when the Passivhaus stuff hit Britain, which I think was about 2008, it was a natural progression for us really. And then in 2010 I decided to specialise just in

Passivhaus, or at least I'm not even sure whether I'm allowed to say, Passivhaus principle building!

Ben: Don't go down that road!

Mike: But we've done quite a few certified Passivhauses now and whenever we do an extension we use Passivhaus detailing. And we've done a few retrofits as well.

Ben: You said something quite interesting there, that you year on year got better at what you were doing for quite a long time, and tried to make things more efficient. I'm assuming that's not a typical mindset of a builder?

Mike: No, I wouldn't say that it is. But for me it was just, it has been very interesting. We were just constantly improving our assembly methods and our detailing, going to AECB conferences.

Ben: But you're one of few builders that go to the AECB conferences aren't you, to be fair?

Mike: Yes, but I think there's probably more builders out there who could be enticed if they knew more about it. And for me it has been great. It's a really good sharing environment. I've spoken a couple of times, or a few times, at the conferences. And I've learnt a lot from other people too. I think that's really really good.

Ben: The main reason that I've come to you is really because of your reputation. It precedes you and a lot of people think very highly of you and how you build.

So you've talked about trying to improve things over the years, but if we want to find someone who's very good at building low energy buildings, we'd obviously come to you if we were in this area. But what are we looking for?

Mike: I think you're really just looking for someone who has a genuine interest in it. That's the issue really. I mean it doesn't really matter, if you're a reasonably competent builder and you've got an interest and you're prepared to learn and you're prepared to actually take things on, look at something you've just done and think I could have done that a bit better, then you can get there fairly quickly.

There's a lot more information out there now than there was. But I think builders are kind of singled out for not being up to speed, but there's also people in all other walks of the building industry who

aren't up to speed either. But I agree that when you go to these conferences it does seem to be a predominance of architects and consultants and so on.

Ben: If I'm looking for you then, is it a bit easier these days that I just search for someone who specialises in Passivhaus, but that doesn't necessarily deliver someone who knows what they're doing? Or does it?

Mike: I would think if someone has decided to specialise in it then they must be fairly well on the way. I mean the whole point about Passivhaus is that it is certified, it's all measured. So you can't really say you're doing a Passivhaus and then not do one. This is why we've been so busy the last few years, because once you get a track record of actually being able to deliver an airtight, thermal bridge-free building, then people will come to you because they know you can actually do it. Whereas going to a genuine, well-meaning but inexperienced builder, is bound to be a bit of a gamble.

We've just done a job for an owner builder, shell only job, which was actually quite a tricky design. The whole building was a very odd shape. It was a new build but it had a sort of extension on the end of it, and it would have been quite difficult. It required a lot of supervision for me to even get our team to do it. We got an airtightness of 0.19. It worked out pretty well, but there was a lot of work. And I was thinking about that afterwards, and thinking really if I was doing that as a first off Passivhaus attempt, I think it could have been quite difficult and might have put a builder off Passivhaus really!

Ben: So what are the differences? I suppose it almost might be difficult for you because you've learnt this incrementally and then you've very much been doing this for the last few years. But what are the differences between a traditional builder, and what you do?

Mike: I think it's really the attention to detail. That's really what I focus on.

Ben: I hear that a lot, but what does it mean?

Mike: Well, what it really means is that, you can be working on a very highly finished building or a really good conservation building project, and really if you've got a good plasterer, then it's bound to look okay! And a good second fix carpenter, but it's just not like that with Passivhaus. There's a lot more thought that needs to go into it.

And I always say to people, with a Passivhaus you have to do A, B, C. And I often tell people to do that, and then you come back and they say, yeah we've done it all. A, B and C are done. And you look at it and you realise that they've done B, A, C. And then when you speak to them they say yeah it's alright, we've done it all, look it's all done, A, B and C are all done. And you look at it and you think, but you've done B before A. And it's really that level of thought. That is actually quite a good illustration. You just have to do things in the right order.

The biggest challenge in building, is doing things in the right order really. And it sounds a lot easier than it is. To get the materials there, and the right people there, at the right time so that everything flows in the right order, takes quite a bit of experience.

So to get back to your question about the what does it mean with the detailing, I think that is really what it is, because if you don't it becomes even harder to do it economically. And you can do stuff, you can do B, A, C, you might be able to get away with it in certain times, but then it might take you two or three times as long as doing A, B, C. And the fact is we're trying to do Passivhauses competitively, and so that's a big part of it.

Ben: It might help for us to go through an example, either of the owner builder that you were talking about before, and some other project, and just for us to understand what you do over the course of the weeks from getting it in to begin with, to signing up with that particular client, to carrying out all of the work. So could you talk us through a project and your involvement?

Mike: Well, we've just done a run of shell-only builds. We've done three shell-only new builds for owner-builders, where we've just delivered an airtight, Passivhaus shell. Normally we would do the complete job.

Ben: Why do they want that first of all?

Mike: The shell only? Well I suppose it's for an owner-builder who isn't really confident about delivering the Passivhaus. We can actually do the shell, get the first air-test done and then they can finish it off. It's not a bad approach really. It will work out quite a bit cheaper than using a contractor to do the whole job, but it is a lot less stressful for them. And it gets done a lot quicker.

But anyway, to get back to the whole project question. A typical project, which would be where we're delivering the house to a so

called turnkey, yeah, we would initially want to be working with an architect who is on message. We're very lucky in Herefordshire because there's quite a few round here. And so it's quite unusual for us to work with an inexperienced architect, but if that is the case we would recommend a Passivhaus consultant, who we also have in Herefordshire, who can help with the architect who may not quite understand what he's supposed to be doing.

So ideally we get a good set of drawings, with some sensible details which normally we would have an input into that. It's not always the case but quite often if I can see any improvements there's usually no reason not to do it. So it's unusual I suppose for me to get good enough drawings to just hand them to the people who are working for and say here it is. But we have achieved that on a few jobs with a local architect firm.

And the next thing we would do is order the windows. We would start the groundworks, ideally we would want to have the windows there within a couple of weeks of starting the job really. What we prefer to do is be able to put them in as we're building. It's much easier to do them as you go along, and it also helps protect the site.

So then we would do the insulation and airtightness, get the first test, then do the first fix electrics and plumbing, then the plastering, then the second fix tiling etc. And also complete the MVHR system. That's pretty much it. My working day really is I still think I work on site.

Ben: But there's a whole new challenge isn't there, when you have a team working under you. Because it's not as if you do all the work and you know how to do it. So is it just a team that's worked with you for a long time that have got into the groove?

Mike: Yeah. I only really use people who, well some of them obviously have joined relatively recently, but they're all full employees. And there's eight of us altogether. It's really difficult working with even quite skilled carpenters or builders who aren't used to Passivhaus. I find it takes, we can get a 30 something carpenter who on paper seems quite good. And really it takes them at least a year, between one and two years really, to really get their heads round it. They've just simply got to do that length of time to experience enough jobs to fully understand all the pitfalls really and to see where the problems might arise.

But now we've got quite a good system now because we've done a run of timber frame, I-beam, buildings, and that's what we've been doing today actually - just started the frame on a new job.

Ben: Sometimes you hear of people who have horrible experiences, they get a builder and they go bust. So why does that happen, how do we make sure that our builder isn't going to go down that route, or is it just you never know?

Mike: I think, you have to say you never know. Builders can get themselves in a mess. I think the strange thing about the building industry is that it is possible to be quite a "successful builder" without anyone really checking up on what you're doing.

And when people suddenly take on a Passivhaus, I was involved in a project a couple of years ago when this happened, we were actually going to do a Passivhaus and the slot I had available for it didn't work out. It took too long to get it going. And so I wasn't able to take it on and the client took on a reputable builder who had done work for the architect, and he just got in a massive mess with it and ended up there was a terrible fall out and, financial and psychological! I can't really explain it, except to say that they just weren't being careful enough.

Ben: Are all these jobs, you go at your own pace, you make sure you do the job well, or do some people try and rush you? Do you have examples of builds that have worked better than others, or is there a fairly steady pace and everything just has to happen as it happens?

Mike: I think some things definitely, some jobs definitely go better than others. But I wouldn't say necessarily that the clients themselves are the problem on a slower job, although obviously change management is a big aspect of running a building contract. And probably most small builders, myself included, underestimate the effects of even small changes. So potential clients would need to be aware of that.

But I think in terms of selecting the builder and making it run smoothly, if you can find the right person, or someone you think who would be interested in taking on a Passivhaus, then yeah, you've got to work with their programme really.

The most stressful thing for me in many ways is actually turning up on time! It's very difficult to predict. The whole process might start a year, 18 months in advance, and even from the point where you

start thinking, right, let's order the windows, sign the contract, it might be still 6 months before we're due to start on site. Well that 6 months for me can easily become 7 or 8 just dealing with extras. It's very hard to predict your programme. So I think you've got to be philosophical about waiting for people to start, but most people would be able to give a pretty good stab as to how long the job would take before they start.

Ben: So that's one of the challenges of what you do as well, that you get a commission and then you're almost trying to time it right so that your employees are still being used on the next project. And it's just a very smooth transition and you don't get too many projects that then give you a hiring headache?

Mike: Yeah, I think that is right. One of the things we didn't really touch on is the issue of supervision. We generally try and work one main job at a time. So we have two jobs on the go, but one's being finished and the other's being started. For me, three jobs is quite difficult. You know, just getting around them.

Passivhaus does require a higher level of supervision. Even experienced people, people who've been with me 10/15 years, they still need help and supervision because not every house is a simple box shape. If it was I'm sure quite a few of them could manage it single-handed.

But actually there's a lot of decisions that need to be made just to keep things running smoothly. And often there's a lot of detailing which hasn't been drawn by the architect maybe, for instance the exact dimension of the window position in the wall. If you don't know that and you've already ordered the window sill extensions you can't put the windows in. It's such sort of thing, it really does require a lot of extra supervision.

Ben: Does it change, let's say it was a single builder or a group of 10 people, to a business that's 100 people. Have you got to be more careful because when you get to that big stage, it's more management as well isn't it? The more people you have, the more complex. Or am I getting that wrong?

Mike: Yeah, I think I would only be speculating because I'm not that experienced at dealing with companies that large.

Ben: I'm just wondering whether there's any advantage of going for a bigger company or a medium sized company?

Mike: I don't see there is. I think you're much better off going for someone you can actually deal with who's going to be personally responsible for it. But having said that, some spectacular Passivhaus building projects have been done by bigger companies, but I'm talking on schools and larger projects. But actually to do an individual house if that's what you're talking about I think you're much better off using a hands-on small building firm. It just needs to have someone there fully responsible.

And the thing is you can't really do it with subbies. It's very difficult to get sub-contract carpenters in. Some of the big housing schemes like the cohousing schemes that have been done, where the builders have ended up using sub-contract labour and the building company turns out basically to be a management company, we have heard stories of difficulties. We're constantly retraining subbies and they don't really understand what they're doing which goes back to what I was saying about experienced guys taking a year or two to get their head round it.

Ben: A question on working as a team. We sometimes hear of this triangle: client, architect, builder. Have your most successful projects in your mind actually had just this really good relationship as well?

Mike: Yes, I think so. I mean that's a whole different subject! Need another half hour for! But the point is the actual, once you get fairly experienced, the actual building work is fairly straight forward. If the architect and the client just said they were going off on holiday in different directions for 6 months, and could we please finish the house before they got back, then that would be quite simple! But really that doesn't happen, so the key to the journey is to just, really the relationships. It's how you get on with people. And it is a really big thing.

Perhaps a lot of builders don't pay enough attention to that. I'm not saying I'm perfect at it, but I think I am aware that you do need to make sure, particularly that the client, is feeling okay and assured that everything is running smoothly. It is quite alarming the disappearing contractor scenario.

And the communication with the architect, that needs to be really good and the best jobs are when everyone's singing from the same hymn sheet and everyone was working on it beforehand together.

We don't actually get involved in many tender jobs. A lot of architects who are experienced with Passivhaus, realise that the

collaborative method is much better. To appoint a contractor really early on and then try and work out the price with them and do the detailing together and make sure everyone understands what's going on. I think that's a much better way of approaching it. I think if I was an individual homeowner doing a Passivhaus for the first time, I wouldn't put it out to tender. I think you've just really, you wouldn't know that the person who wins the tender understands what he or she is about to do.

Ben: And that sort of brings us round to where we started as well, as to how we find someone who is a good builder of low energy homes, Passivhauses. And we've talked a bit about attention to detail, experience, all of those things. Is there anything we can do in terms of assessing ourselves . . . is this a good site? Is he doing a good job? Other than speaking to perhaps your previous clients?

Mike: Well I suppose the AECB is a good starting point for choosing a builder. If you can find a local builder who's in the AECB that means that even if they haven't done Passivhaus, at least they're interested and they've probably heard of it. But yeah, it's worth looking at previous jobs.

And I think it's just, all I would say, is it's fairly, it must be fairly easy to detect the interest level in the builder. I mean I've been to AECB conferences and met builders who've been there for their first time and it's very obvious that they're actually genuinely interested in it, and even though they're not experienced they would be able to take it on.

Ben: Well let's just finish up this conversation. Is there anything else that you feel we should mention?

Mike: I think we've pretty much covered it all. I suppose there is a whole other conversation to do with pricing and the cost of the job. I mean you do need to realise that it is different doing a Passivhaus. And a lot of committed Passivhaus builders are doing jobs quite competitively actually.

People always say how much more does it cost to do a Passivhaus, and we mumble and say, well you know, probably within 10% or something. But actually you could easily be doing a Passivhaus for less than another builder would be charging to do the same house, to a very high quality. Whereas a Passivhaus by definition is very high quality. So you might be getting a better deal. But I think you do need to be aware that you're not going to get the

same price per m² as a building regs job. But even if it's 10% more it's 10 times as good!

Ben: Mike, thank you very much.

Mike: Okay, that's a pleasure.