

# HPH344

## **Ben Adam-Smith** 00:00

This is House Planning Help episode 344. Hello, I'm Ben Adam-Smith and this is the broadcast 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 guest is Janice Gardiner, and we're going to be looking at her award winning project. This is quite a good example, if you think of Grand Designs and how there can be drama in a project. This is a no drama podcast today, just making you aware. And I thought before we begin, we ought to give another shout out to Josh, who is the project architect, Green Trace Architect, and we've made this little double. So if you haven't heard Josh's episode maybe flick back to Episode 343. Before you listen to this one, think it makes more sense in that order, just so you get some context, from the city project to this, out in the beautiful countryside. And Janice is in fact an ecologist, so what does an ecologist build? Well, we're gonna find out all about her award winning project, Hazel Tree Passivhaus. I started by asking Janice to tell me how this all began.

## **Janice Gardiner** 01:15

Gosh, so wanting a change as soon as children leave home, it's time to have an adventure. We weren't necessarily looking to build, we were just looking for a house in the countryside. Not a huge house but ideally with a big garden or some land around. We started looking Herefordshire which wasn't too far away from Clevedon, where we were. And we didn't find a house that fitted the bill, but eventually found this piece of land for sale. And when we came and looked at it, we fell in love with actually the field that's next to the building plot, which was just a sort of grassland field. So that started the next phase of our life, really,

## **Ben Adam-Smith** 02:05

maybe you could describe this site then.

## **Janice Gardiner** 02:08

So we're just about an acre in size. Where the house is built was the old pub garden, the pub's no longer a pub. And then behind us, we have a field that's just a grass and pasture fields and a vegetable plot. We have eight cider f trees, we have a shed that we're renovating, and then the view to the front of the house is over an orchard and out to the hills behind. So very beautiful.

## **Ben Adam-Smith** 02:38

You've made it sound quite easy that you found this site. Was it like that, actually, that you really were looking at houses mainly? And so be flexible has found you this site?

**Janice Gardiner** 02:48

Yes, yes, it was it was it just happened to be there, available, in an area that we were looking and we just sort of thought, why don't we have a look? We'd always looked at Grand Designs, we'd always watched it, we'd always thought we'll never do anything like that. And I think it was just seeing it in a place that we weren't considering we just thought well, let's have a look and see what's possible.

**Ben Adam-Smith** 03:11

What was the competition like then because often you can have a site and there can be 30 people or bidding?

**Janice Gardiner** 03:17

Well, we were sort of in COVID, I think, we were sort of in between times. And when we came to see it, there was definitely 'Oh, there's someone else interested', is what we were given as a story. I don't think there was more than that, you know. So it did mean that we acted fairly fast in terms of going for the plot and making a decision.

**Ben Adam-Smith** 03:41

Did it have planning permission?

**Janice Gardiner** 03:42

It did. So it had outline planning permission for a small house, maximum of 100 square metres internal floor space. And it's basically replacing a small chalet that had been originally an illegal dwelling, but eventually got planning permission. So it was to replace that, but not on the actual footprint of that and they wanted it closer to the other houses in the road.

**Ben Adam-Smith** 04:09

And what did you want from this house then? 100 square metres was that ideal? Or you know what?

**Janice Gardiner** 04:15

Yes, I think it was fine. Because we were thinking of downsizing. You know, we'd been in a Victorian terrace that had four bedrooms. It was really just for mainly for the two of us, but we're space for anyone who comes home. And we've done up a Victorian terrace for sort of 20 years. So we were constantly looking after the house and making improvements. So I think there was this, we actually want a house that will look after us. And that's really we wanted it to be eco. So that was one of our criteria to start with. My background is in nature conservation. So the environmental side and the ecology side was very much there. Then because we knew we wanted an eco build. We started Looking for architects that had those credentials. And actually, we didn't go to Josh directly green trace architects to begin with. We went to someone that he worked with, and they recommended him. So we met here in a sort of rainy November day and he had a look in the most appalling conditions, had a really good chat with us in the pub and said it will probably take you two years to get, not the year that you're thinking, it will be more like two years before you're in. And he was he was right and that was how long it took.

**Ben Adam-Smith 05:36**

So was he your guide on what passes as ecological? Or did you do a lot of other research.

**Janice Gardiner 05:44**

And we already knew a little bit because we were aware of things that we didn't think we could get to, we didn't think we've managed to do Passivhaus certification, we didn't necessarily think we'd do solar panels, we wanted to, but we didn't think we could stretch to that. He was then our guide as to the method of construction, obviously, the design of the house. But he did a really good feasibility study with us in terms of what it is we wanted, how we wanted to live, what our ethos was behind it. So he definitely guided and guided that.

**Ben Adam-Smith 06:17**

So what is on the brief?

**Janice Gardiner 06:19**

So, it was to be an eco home. So as ecological as we could afford. We wanted it to be modest and simple to live in, straightforward to live in, to have an element of joy and calmness about it, and also quite modern.

**Ben Adam-Smith 06:39**

And is that something that's easy to tick off with a local planning department? Or do you have a bit of a fight on your hands?

**Janice Gardiner 06:45**

No, they they took a long time to make decisions. One of the good things about the outline planning permission, they had just said a two bedroom house, they hadn't specified any design. So that was really handy for us that we could actually go to them with the first time with the designs, we moved the house further back into the site to protect the large Hazel tree at the front and they accepted that. We didn't have any, I mean I can't remember if there might have been tiny things we tweaked, but we didn't have any problems with getting planning permission for it.

**Ben Adam-Smith 07:23**

So far, this is sounding like a nice, easy. I don't have any of these stories. There's always something about to jump out of the woodwork in a minute. And what build system then did you use for the house.

**Janice Gardiner 07:35**

So it's a timber frame with the I-joists, and then it has wood fibre, either side of that blown cellulous within and it's on the Isoquick rafts, and then its clad on the outside, half of its clad with tin and half of its cedar.

**Ben Adam-Smith 07:53**

Is that driven a lot by wanting something more modern? Was that part of that decision making?

**Janice Gardiner** 07:59

Well, that was in his design. So that was Josh's design from the beginning, when he first did black for the tin. I was 'oh gosh can I be that brave?', and then as time went on, so actually, grey is being used a lot in very urban settings. So actually, let's go with the black, and we're very glad that we did. So no, he that was where the design element really came in.

**Ben Adam-Smith** 08:23

Yeah, I think it looks really striking and even when we're recording this, we're looking at our round window, are those easy to specify?

**Janice Gardiner** 08:31

No, and Josh would have said that's probably an expensive thing to have. That was our daughter saying you need a feature window. And it does definitely work. Because of the way our drive comes around the back of the house, we're always approaching from the back. So the round window is a feature. And once you've thought about doing that, and Josh actually did try different shapes to see what he could get to work and actually, no the round, once you've got the idea the round stays. The window is fine and getting around window, its the green building store like all the other windows, the hardest bit is your surround, external surround for it, which our builders ended up making out of wood and designing it themselves to to get it to work.

**Ben Adam-Smith** 09:20

Yeah, so it's just a bit of extra bespoke making sure we don't ruin the airtightness.

**Janice Gardiner** 09:25

Oh, yes.

**Ben Adam-Smith** 09:26

Yeah, it's always tricky, isn't it when you've got these decisions to make? Because it does, it does add a little bit of joy, and particularly with the cladding thing. I think it goes quite nicely. It's not a typical box in terms of if you're looking to really save money and keep it simple. So was that anything within the brief?

**Janice Gardiner** 09:47

I think the straight A frame shape as Josh explained that would have been your simplest form and your cheapest form. He came up with the idea of lifting part of it to create this opening and this veranda. And once you've seen that, it's very hard to just say 'Oh, no, we'll just go for that', you know. So I think that is the thing that happens. You're on a creative journey with your architect, and then with your builder, and some of the joy of that is doing those things, rather than sticking with just what you've said, and just what the budget is maybe dictating. So I think your personality comes through in the decisions you make there.

**Ben Adam-Smith** 10:36

What about the budget, then presumably for downsizing? That makes it quite nice and easy? Will you? You know, did you stick to what you wanted to?

**Janice Gardiner 10:43**

No we didn't stick to what we wanted to at all. I mean we were at a time when wood prices were skyrocketing. Everything went through the roof. But I would actually say, we did stretch ourselves because we wanted to do, so the things that we said we can't afford, like the solar panels, Passivhaus certification, they were things that we really did want to do. And we really did want that quality of finish. So I think you can say to yourself, I'm not going to do it. But actually, once you're actually doing the build, and really involved in that process, you've got to be very strong to not not go with what your heart actually wants. So no, we stretched our budget. Definitely. And I think that's probably very, very common.

**Ben Adam-Smith 11:32**

Yeah, I seem to remember, even on my own build, we had one of these situations where you could theoretically downgrade the render, but it would just completely transform the building. And we thought, No, I think we'll just pay more for that.

**Janice Gardiner 11:44**

Yeah, and that's, I mean, we did I think we simplified the tin, that was one of the things, we were going to have one of those flatter, more expensive versions. And we went for more straightforward tin, which actually, I think is really, really nice. And that fits in a very rural setting. So there are things that you can do that don't feel like that compromise. But other times you just think, I'm only doing this once, you know, let's do it how we want it to be.

**Ben Adam-Smith 12:13**

And who is going to build this then? How did you find a builder?

**Janice Gardiner 12:16**

So again, we had looked for builders that we knew did eco builds, and we were going with one builder, who then actually put us in touch with someone they worked with locally, who's Dai Rees the Passivhaus builder. And we were going to do it with them joined at one point, but in the end, Dai did it directly for us. And he lives half an hour away. So he project managed, was the main contractor, main bills, and then we had different contractors for groundworks and for the concrete that we did need.

**Ben Adam-Smith 12:49**

So you mentioned about not going for Passivhaus certification, but someone like Dai very clued up.

**Janice Gardiner 12:55**

Yes. And Josh, in terms of you know, his design. Yeah. So they both, they knew they could get it pretty much to Passivhaus. We'd always had the MVHR designed into it, because we knew we were going for as good as we could get. And then I think just at some point, we decided, Okay, we will go the whole way. And maybe we're getting such good results anyway. And then Josh did his certification trainings through the build.

**Ben Adam-Smith 13:24**

So did you get it certified during construction? Well, you'd have to obviously finish it. But what I mean, is you made that decision.

**Janice Gardiner 13:32**

Yes, you did. Some I can't remember when but at some point.

**Ben Adam-Smith 13:36**

It's quite interesting though, in terms of, you know, I imagine you would have got the same product. When you've got people who have done so what did you like about getting it certified?

**Janice Gardiner 13:46**

That's a good question. I think maybe it is just your, your testing your build in terms of your reaching those standards, you just feel that you've then gone for as much as you could.

**Ben Adam-Smith 14:00**

Yeah, I think some of it is also for resale, I would say there's a big difference. If you're not going to carry out any post occupancy and you know, actually get physical results for a building. Having certified means something it's a quality assurance.

**Janice Gardiner 14:17**

Yeah, you've got that far, you know, becoming a Passivhaus the felt a good thing to do, really.

**Ben Adam-Smith 14:24**

Can you remember any of the key challenges during construction.

**Janice Gardiner 14:28**

So, laying concrete in the eyes acquit was probably our biggest and that was partly getting concrete to site. So we had to have smaller delivery trucks rather than one large concrete mixer.

**Ben Adam-Smith 14:43**

So that's access is it? because you've got quite good access, admittedly, you got to go round the houses a bit.

**Janice Gardiner 14:48**

It's reasonable, but you can't get a long wheel base. So some of our work was delivered to the farm up the road and actually tele-handled down and things like that. So yes, the concrete was a bit of a nightmare because they didn't deliver it as fast as they should. And then the plant, they were getting it from broke down halfway through. So they had to go to another place to get the rest of it. And we were laying what was our final floor as well. But the build itself was complete within nine months.

**Ben Adam-Smith 15:19**

And how much were you on site and checking over things? Or were you just visiting once every couple of weeks,

**Janice Gardiner 15:26**

We we lived in a little bungalow nearby, so I was here or could be here every day. So I had communication with Dai or with the groundwork team all the time, really. I would say that the first stage of the build, you're not needed very much as a client, which was quite a surprise, you've been so engrossed in it for such a long time. You know, the builder is following the architects plans for all of the external work. And you sort of, you know, get used to not really having very many questions, or just having a look at things, maybe you're looking at the windows and stuff, and then suddenly it comes to the internal and you're suddenly, Oh, where your stairs going? What stairs Do you want? What's your electrics? You know, where do you want your sockets? Where's your lights and, and suddenly, you're really are in demand and having to make decisions. And you know, really thinking about the internal layout and structure and you haven't even got walls necessarily. So that's sort of quite a challenge to then think about those decisions.

**Ben Adam-Smith 16:21**

And one of your key finishes in quite a few rooms is the clay plaster. So how did you settle on that?

**Janice Gardiner 16:42**

I think we'd always liked the idea of something like that as an internal, but we also visited Old Holloway up the road in Little Birch, when we were still designing the house actually, because we were possibly going to use the system that he he uses for the build. But he very generously showed us around. So he had quite an influence on some of our finishes and we could see clay plaster in his house. So that was just a reality check of what it's really like. So that was a huge part of actually going to see another house that had done similar things. As I say he inspired us on quite a few aspects. So we can definitely acknowledge his help in that.

**Ben Adam-Smith 17:27**

Were there any tricky bits to finish off? What took the most time?

**Janice Gardiner 17:33**

All of the houses clay plaster, all of the internal finishes, which was some debates about whether you do some clay and some not, so it's on two different surfaces. So some is onto the wood fibre and some is on to sort of more of a straight board. So it's a big part of the finishes getting the clay plastering done. But then it's done. You know, you don't have to paint unless you choose to. So basically, once all the plastering is done. That's it your house is decorated. We have put wall glaze on it to just stop it being dusty, but that's all. We did the kitchen ourselves so that was probably more tricky.

**Ben Adam-Smith 18:16**

What does that mean?

**Janice Gardiner 18:17**

We designed ourselves which because it's a very simple open plan kitchen and then my husband Colin and two very good friends helped actually instal it. That was a good tricky weekend to get it done.

**Ben Adam-Smith 18:31**

But it's DIY kitchen just using all the materials that you've sourced or you've put in a kitchen.

**Janice Gardiner 18:37**

Yeah, we bought it. So it's fitting it Yes. Yeah. No, it's not. Not completely construction.

**Ben Adam-Smith 18:42**

So when was the handover when I finished work on site, then?

**Janice Gardiner 18:47**

We started moving in, in September. Our other tricky thing was with the boiler which had to be replaced. So I think that stopped our complete moving in. And he was still doing some bits and pieces, but it was definitely livable by that point.

**Ben Adam-Smith 19:06**

So you've gone for an air source heat pump here. Is that what was replaced?

**Janice Gardiner 19:10**

Yes, so all it's doing is heating hot water. And that was again something from old Holloway that they had used. So we're using that same source and it was just damaged basically it was damaged. So when the plumber put it in and started it was leaking and at some point before it had arrived with us it had been damaged during construction.

**Ben Adam-Smith 19:32**

You were telling me to about your mini plant room. Maybe fill us in on that.

**Janice Gardiner 19:38**

So basically we have probably got the smallest, that makes me laugh this plant room idea that doesn't have plants as in growing things in it.

**Ben Adam-Smith 19:47**

Yeah well you would want it then, wouldn't you!

**Janice Gardiner 19:49**

So yes, it's very small and Dai was very much concerned that if anything went wrong with the boiler we wouldn't get it out. So he said we need a removable wall. Which is what he did. It's just a basically a stud wall that can be removed, and then he had to remove it. So it was very, very well planned. And I think that was the lovely thing about the design process as you're really your builder is solving problems, and coming up with solutions all of the time, actually. And that's that was what was really lovely. It's like, we have a very strange shape downstairs shower to just sort of fit in a very compact space, which caused quite a bit of headache of, well, how am I going to make a shower tray here, because I can't buy one unless you want to spend a lot of money. So it's those things that you're solving as you go with help and very, very good builder.



**Ben Adam-Smith 20:45**

It's also interesting, you've got a little bit of double height space around the house, you've got the kitchen at the heart of the house, you know, what else would you describe about the finished product that you love?

**Janice Gardiner 20:57**

So we wanted it to be open plan. So it was a sort of living space, it's I suppose, the kitchen goes on to the dining and to small sitting space all as one. And the idea was, that's the social space for the house. So it was lovely. Last Christmas, we had all the family here, you can be cooking and still part of everything that's going on. And that felt exactly what we wanted. And then if you want private space that's either coming to bedrooms as a separate space, so we do have a chair in our bedroom. And then an office space that is more functional and actually can be more messy. You can keep, you know, you can keep the sort of mess out of that central social space. We only got the external patio finish this August. So we haven't really had that chance to sort of really deal with the outside space as such yet and see how that functions. Because the idea is almost you can go round from each door of the house along the patio without having to go on to the garden at all. So just we haven't really experienced that bit yet of running around from one door to the next.

**Ben Adam-Smith 22:11**

Well, I imagined that that adventure will go on for a while it's five years and counting on mine. But it is getting better! Each year, it gets a little bit better.

**Janice Gardiner 22:19**

Yeah, we've still got stuff to do, definitely.

**Ben Adam-Smith 22:21**

What about the Passivhaus? Has it lived up to what you were expecting?

**Janice Gardiner 22:26**

I think you have no concept of what it's going to be like to be in a passive house until you've lived in one because it's just that everyone sort of says it's warm. And, you know, you're so used to having cold rooms, in certain parts of your house, and then you heat them up, and then it might be too warm and then you go out into the hall and it's cold. A Passivhaus is just the same temperature throughout. So the whole space in a sense is livable, and the same temperature. We are very geeky about it because we do constantly monitor the temperature, internal external temperatures, we have and monitors all over the place. And you have to learn to manage it as well, I think, because it is so different and so new. So there's been no heating on in the house today. That's not always the case by any means. But it was 19 when we woke up this morning, and it's gone up to just about 20 just from as being here and having the oven on a bit.

**Ben Adam-Smith 23:29**

And down to freezing overnight. were you last night?

**Janice Gardiner** 23:32

Yeah, it was probably close to. So what we're finding is it drops one or two degrees overnight, because it's not 100% efficient in keeping um keeping the temperature in. And then in the evening, when you're sitting down more, that's when you might want to have a bit of heating on just to sort of boost that temperature a bit more. And we just use an electric fire and we have the towel rails. But that is all that we're pretty much using.

**Ben Adam-Smith** 24:02

And the bills, does that also compare nicely? Not only downsizing, but yeah, reducing too.

**Janice Gardiner** 24:09

Yeah, definitely. I mean, so obviously, it's only electricity that we have, we export because we don't have batteries. So we're probably producing nearly twice as much and exporting twice as much as we're using. And we're getting some money back for that export of electricity.

**Ben Adam-Smith** 24:27

Would you look at a battery? Is that something that could come down the line or not really enough space? Or?

**Janice Gardiner** 24:32

Maybe? They're very expensive. So I don't know, I think it's still out on that. I don't mind exporting it in a sense. Try and use it when we can obviously but we get a reasonable rate back.

**Ben Adam-Smith** 24:47

And you mentioned that you've got some visitors coming round tonight to me as well, is this local eco group, is this incorporating housing as well or is it just more your old background?

**Janice Gardiner** 25:00

I think everyone is interested and obviously Herefordshire has got a quite a good line in Passivhaus building, but we're looking at the sort of wider, How do you, how'd you become resilient as a village? How do you make changes, I suppose, to how we're living that make us more sustainable in the long term, and prepare for the changes that we're probably going to have to make. So yeah, so there's a lot of interest just in that general, caring about wildlife nature, growing more of our own food, or, you know, looking after gardens and things as well. It's harder for people to do the build side of things, or the renovations can be quite costly. We are lucky to do it from the start, I think.

**Ben Adam-Smith** 25:47

Yeah, it is a lot easier. There is no doubt about that at all. So you've done very well, you've you've hit your Passivhaus. But I mean, from a material point of view as well. You've low embodied carbon pretty much throughout the house other than the foundations.

**Janice Gardiner** 26:00

Yep, and it's the Isoquick is then just gives you a tray of concrete so that's your only concrete in the whole build, no steels or wood. So yeah, I think it's, I think it's pretty much negative.

**Ben Adam-Smith 26:15**

And an efficient use of word as well, yeah, you get value for money. Anything else that we haven't mentioned, that is good in this conversation, any advice for someone who might tackle a project like this?

**Janice Gardiner 26:30**

I think you should try and enjoy the whole process. And I think there's something about really working with people that you have a good relationship with. And, what I found lovely about doing an eco build is, because people are doing that, and are trained and that's what they're interested in. You're all trying to achieve the same thing. So you're all working together to achieve something. You know, I don't think it's just a job. For anybody doing this. There's a bit more of a meaning behind it for all concerned. And I think that makes for a really enjoyable process, or certainly that's what we've found.

**Ben Adam-Smith 27:11**

Do you think you did particularly well, in picking people? I don't know whether this is maybe a skill that we're uncovering here, perhaps because of your your background? Because I think this is this has gone pretty well, this project, what I can tell from the outset.

**Janice Gardiner 27:24**

It went brilliantly! It has gone really, really well. And I think knowing we wanted it to be an eco house helped from the start, because then that's what we were looking for. And to some extent, you can say we we were lucky to come across the right, the right people. But I think it was then just trusting your gut about how you got on with someone because I think that relationship is something that's going to go on for nine months or whatever. So you know, I think putting that into your decision process is very important, because it is it's a process you're all going through for that length of time.

**Ben Adam-Smith 28:03**

Well, it's a fantastic house that you've got here. Good story as well. Lovely to meet you, Janice.

**Janice Gardiner 28:08**

You're very welcome, Ben. Thank you.

**Ben Adam-Smith 28:12**

Head online to take a look at the show notes for this episode, you'll find them at [houseplanninghelp.com/ 344](http://houseplanninghelp.com/344) , lots of lovely images taking you right through the project. You can also check out our summary that we provide of the key learning messages through this. So you can take them on board for your project. If you've got a comment, or you'd like to ask a question, you can do that within the show notes, just head down to the bottom or on social media, we'll give you some links. And of course, we will link you back to Green Trace Architect. All of that at [houseplanninghelp.com/ 344](http://houseplanninghelp.com/344). My call to action is to check out The Hub. In fact, it is to give it a little taste. The Hub is a membership community that I run and it's something that you don't have to do forever, you can dip in and out of it. So why not? If you haven't done it already, and you're in the process of a project, it doesn't really matter what stage you're at. In fact, the earlier you are probably the more sense it makes because you can spend your time going through there. And we always find that the people that spend the most time and

get the most engaged, get the most out of it. I suppose that's a lesson of life as well. So we have things like our in depth video case studies, our courses, our members only forum, live training from different guest experts who come in and say hello. And of course we've got ask the experts Es Tressider answering your questions. We're gearing up for another session with him. We keep these regular throughout the year and we're hoping to add more guests as well in different areas of expertise. And we've got the office hour with me so you can have a chat and I'll give you my thoughts on the project as well just to throw it into the mix. Find out more at [houseplanninghelp.com/join](http://houseplanninghelp.com/join). Next time, Sarah Lewis from the Passivhaus Trust is my guest what is PHPP? You've probably heard it thrown around we'll explore that acronym next time with the lovely Sarah. The House Planning Help Podcast is produced by Regen Media, content that matters