

HPH312

Ben Adam-Smith 00:00

This is House Planning Help - episode 312. Hello, I'm Ben Adam-Smith. And this is the podcast 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 Jeffrey Hart, from the Building Sustainability Podcast, is my guest. And we're going to be hearing about his own house build. It's a tiny house. And this is great to have not only a UK example but one that embraces building physics. And it's going to have lots of lovely materials in.

Ben Adam-Smith 00:36

Now, perhaps unsurprisingly, I'm someone who always meets people who are building houses, whether they gravitate towards me, whether they hear about me, I get into those conversations. And so it was quite interesting for me this week that I bumped into someone who, I would say, had done virtually no research and was quite advanced in their build. That's often the other thing that I find, that if people are too far down the road, I don't really want to say, well, have you considered this or perhaps speak to this person. So this was one of those cases. And maybe things will be fine. You never know. It was a recommendation, I think, they'd got from a neighbour who had done a similar project. And yeah, maybe it will work. But I always say the more research you can put in... and often I find the people I speak to have done a ton of research, it's ridiculous. But if you do bump into someone who you think, hmmm, you haven't explored this too much, please encourage them to delve around a bit more. There are all sorts of great resources. I'm happy to recommend some. We obviously help here. I'm sure Jeffrey, at the Building Sustainability Podcast, would welcome you with open arms as well. So just make sure there are no regrets. And sometimes I find this as well that people are just about to start on site, they've got all their technical drawings, and you feel like they're researching at the same time, and perhaps discovering better ideas.

Ben Adam-Smith 01:59

We've talked to tiny house dwellers before on the podcast, but never from the UK. And perhaps in the past, they've been more invested in the lifestyle rather than actually looking at the exciting bits of the building project. So this is going to be good today, Jeffrey Hart, the natural builder, he focuses on building highly efficient homes from low technology materials. And I started by asking him where his love of building came from.

Jeffrey Hart 02:26

I always loved making things. And I remember very vividly going to a friend's house and his parents were quite open and, you know, let them do what they wanted a bit more. And he was given a saw and some wood and some nails. And we sat there in the garage, knocking these bits of wood into... I think we made boats, out of a few scraps of wood. And I remember thinking that was just the best, most exciting thing ever. And that continued throughout my schooling. I very much was focused on doing design technology, as I think it was called then, pushed all the other subjects aside so I could keep making things. And my teachers then were very supportive. They would open up the school on

Saturdays, so we could come down and spend more time working on our projects. So I think that was really pivotal. And those same teachers said: "If you like this, you should go and do industrial design at university." And so that's what I did. And it very much took me into designing for commercial or mass production. And by the end of that course, I was burnt out and really wasn't very excited by the idea.

Jeffrey Hart 03:41

And so I became a graphic designer almost by mistake. But then it was a break from that where I decided I just needed to get out of London and the office sort of life. And I went over to the States. I was snowboarding. That was my thing. And then in the summer I didn't really know what to do. So I jumped on this travel bus and ended up in this tiny little town. It was 200 people in Canada. And these people had built their own homes from straw bales and windows they'd found. And I found it absolutely captivating that you could do this. Just randomly someone said: "We're plastering this the straw bale workshop, do you want to come and help?" And I was instantly enamoured with it. It was so easy to get involved. And looking back, I see all sorts of flaws in the details that make me wince a little bit now. But yeah, that point was sort of the entry.

Ben Adam-Smith 04:36

And how does that translate? You come back to the UK after that?

Jeffrey Hart 04:40

Well, I ended up spending five years out in North America, travelled around the West Coast, did a lot of building in Utah. And yeah, eventually just thought, I think I want to go home and do this in my home place. I had a calling, I think, to make the place that I was from better in some way. So yes, went home, looked quite a lot into the heritage building because I was interested very much in the vernacular and how we choose materials based on our location, and did The Prince's Foundation Building Craft Apprenticeship, which is an eight month programme which takes heritage and sustainable builders and gives them a project to work on the Dumfries Estate, which is one of Prince Charles's estates. And then it sends you out into the wider world to do placements with people. And that really, for me, was the big... it served to introduce me to the building world in the UK and got me to know a lot of the people who I've gone on to work with.

Ben Adam-Smith 05:51

I think it's fantastic that Prince Charles and the Royal Family are so passionate about the environment and clearly using their influence in any positive way that they can.

Jeffrey Hart 06:03

Yeah he wrote a fantastic book, or co-wrote, called Harmony which is all about the food systems and the education systems and the way we build and how we've lost harmony with the land. And that's totally what I think and feel. So yeah, to have someone with his stature championing that is really good.

Ben Adam-Smith 06:25

Well often when other countries get criticised for moving into agriculture, say for example they've chopped down rainforests, maybe made some orangutans homeless in Borneo, or whatever it is. And

they get criticised heavily by us, whereas we've just done that 200, 300 years ago, and we're looking around in our environment, nothing has changed in our lifetime, but we've done it too.

Jeffrey Hart 06:48

It's like the sort of building... a lot of the developing countries all look to us and say, well, we should be building concrete houses because that's modern and that's fantastic. And these are quite often countries with a rich heritage of clay buildings and earth buildings, materials that they can get from right there and perform really beautifully. But in this quest to be modern, they end up building big concrete boxes, which are not particularly habitable, I guess.

Ben Adam-Smith 07:19

Now, coming back to your story then, you wanted to build yourself a house. What options were open to you?

Jeffrey Hart 07:28

Well, I spent a long time looking for land. I was looking at the One Planet Development in Wales. And yeah, I spent an awful long time looking for land and I went to see so many different places. And I came up against, again and again, that certainly in England if I were to buy a piece of land, then I wouldn't be able to get planning on it or it'd be a massive gamble. Or I could buy a piece of land with planning permission and the price would be quadruple, and I'd never actually be able to afford to build the house.

Jeffrey Hart 08:05

So for many years I lived on a boat as a way to circumnavigate that, moving around on my little canal boat. And that very much put me in the mindset of small spaces. And I think that mindset had been set by that time in the States, when I was moving around every six months, didn't have much stuff. It was sort of what I could fit into the back of my Ford Explorer. And so moving on to a boat was very simple, because I didn't have anything to fill it with. And so that progressed into this idea that I could build myself a tiny house and have more space than the boat, but still be very affordable and compact.

Ben Adam-Smith 08:50

When you go onto a boat, is it an attraction that you can move the boat around? Or are you very much tethered in one location for some time?

Jeffrey Hart 08:58

So initially, I bought the boat when I was in London and I moved it around every two weeks. And it was definitely an attraction. I mean, just every two weeks moving to somewhere new. And the first thing you do is you go and find the local launderette or the cafe or pub. I know London through this little wiggly strip of canal.

Ben Adam-Smith 09:25

Oh, you're making me jealous now.

Jeffrey Hart 09:28

Well, it's easy to romanticise but there are hardships as well.

Ben Adam-Smith 09:33

But do those hardships translate into the tiny house living as well? Or is it just on the waterways?

Jeffrey Hart 09:43

I think with the tiny house, I'm going into it a lot more... like my setup is a lot more complete. The solar system that I'm spec'ing is enough to do my whole life and also one of the main advantages is I've actually got insulation, which is a complete novelty! The boat was a steel corridor with no insulation, submerged in mostly very cold water.

Ben Adam-Smith 10:16

I'm imagining you hadn't bought a very modern boat and you're looking at it almost thinking, oh this is beautiful, or I know what I'll do from my building perspective.

Jeffrey Hart 10:26

Yes, I bought a relatively rundown, grotty... It wasn't a shell, it was quite nicely fitted out, but it's very dated. And yeah, it was definitely about the lifestyle. But also, it was about affordability in London, I was being priced out, pushed out further and further by the rental prices. And I was very fortunate because I had a small amount of inheritance that I could buy the boat with. But the hard reality of winters when you'd get home and I had a diesel heater as a heat source, you turn that on. And all you could really do was get straight into bed wearing all your clothes, because it will take that long to heat up. And that was just my normal life for a long time. And so yeah, the tiny house, when I realised that actually, I'm going to wrap myself in insulation, I'm going to be warm. What a treat! Yeah, this is so much better. And I going to be able to stand upright in all parts of the house, rather than just the central strip of the boat was where I could fully stand up. So yeah, it's definitely that there's a romantic idea of the boat. But realities are somewhat different.

Ben Adam-Smith 11:43

Yeah, so there are some parallels. But also, I imagine, even if you bought a state of the art canal boat, how much better can it get?

Jeffrey Hart 11:53

Yeah, I mean, I think the more modern boats, definitely, they think about insulation. But still there's a huge amount of thermal bridging. And it's still a metal box sat in cold water. And you know, there's condensation issues. They're not ideal things to live in.

Ben Adam-Smith 12:13

So the tiny house movement is often pictured on trailers and so forth. Is that what you're building?

Jeffrey Hart 12:20

Yes, yes, that's exactly what I've built. Well, I'm, I wouldn't say I'm three quarters of the way through, I'm maybe five sixths. So it's a trailer, custom built or purpose built trailer, that's six and a half metres by two and a half metres. And the idea is that because it's on a trailer, it therefore sidesteps planning

regulations. It is a movable thing. It can be put in different places. I should say this has all come about because I was living on the boat, decided that I wanted to have a land-based existence. And so I started just asking around to anyone that I knew with connections to people with land. And one person that got back to me was someone who is, they've got an old estate in West Somerset, and it's a 700 year old estate. It probably would have had 20, 30 people working on the on the estate at any one time. And that was probably 100, 150 years ago. And now there's no one really. It's heading towards dilapidation, and the people that live here don't work here. And so they were crying out for someone with building skills. They said to me, "Why don't you come and live here? Do a work exchange for your rent. You'll need yourself somewhere to live, though." And I thought, aha, now is finally that opportunity to build a tiny house.

Ben Adam-Smith 13:52

That opportunity, was it easy to find? Or was this more because you were free to go wherever you needed to go? Had you looked at any other options?

Jeffrey Hart 14:05

I sent out quite a lot of emails to lots of different places and largely got ignored, which is fine. There are a few that got back to me that were interesting. This was definitely the most free, gave me the most options to do really what I wanted. But yeah, I mean, I think that's the biggest thing that I get asked about the tiny house is how do you find the place to park it? Because I think lots of people are in a similar position to me as they want to build a house but they can't afford the land. That land bit is the big sticking point.

Ben Adam-Smith 14:40

And having that trailer allows you to move on if the relationship comes to a close, but I imagine you want to stay put for some time at least?

Jeffrey Hart 14:49

Yes. Yeah. The idea of staying put feels very, very appealing right now. I think with a lot of people who specialise in natural material building, you end up travelling around the country a lot. So follow the work. And it's exhausting after a while. And so to stay in one place is a real, real draw. But equally, I've still got that boater mentality in that what if it goes wrong, I don't want to so firmly root myself that I can't leave, and I'm stuck. So it's probably a commitment issue thing.

Ben Adam-Smith 15:26

Well, it's funny when you are someone who has settled down and you've got kids, and so forth. And perhaps like me, I've travelled a lot in my early days, you miss that, you do. That's what I was saying about, you sound like someone who likes adventures to me.

Jeffrey Hart 15:42

Yeah.

Ben Adam-Smith 15:42

And whether it's on the boat, or whether it's down here, you're on an adventure. And I like that too. That's probably for me one of the most exciting things about building the house. I don't have to live in this house. You know, I enjoy living here. But just everything that I learned going through the process and meeting some amazing people.

Ben Adam-Smith 16:03

So what was important then? You'd built up a lot of knowledge through all of your building work, you know you want a tiny house. It looks like it's going to happen. How do you design it and build it? Is this the easy bit?

Jeffrey Hart 16:19

[Jeffrey laughs.] No.

Ben Adam-Smith 16:22

Let's laugh about that for a couple of seconds!

Jeffrey Hart 16:28

Yeah, no, not at all. Well, since university, I haven't really been a designer, I've been a builder, I've been a maker. And I've got a huge amount of respect for what architects do and how they understand space and they understand lighting and things that I don't really understand. So to design this house, in terms of layout was me sat there, you know, I drew out on squared paper, the very small footprint of my house. And then I got a little piece of paper that I made the size of a bed, and I got a little piece of paper that I made the size of a desk, and a little piece that looked like a wood stove, and I moved them around. And I thought about all the things that I want in my life, what I felt like I didn't have on the boat. So having a decent sized kitchen to cook in was a big draw, having actually just a space where there was nothing so that I could stretch and lay on the floor. And do exercise. That was a really big design requirement in my house, which is a strange thing to put into a tiny house is clear space, because almost everything is double functioned and well crammed in.

Ben Adam-Smith 17:50

Well, I suppose one of the big advantages that you have is that you're moving from something that sounds more awkward into this purpose designed house. Would that be a fair point?

Jeffrey Hart 18:01

Yes. Yeah, I think so. The boat, while I loved it, it had no relaxing area. There was a built-in table and seats that I spent most of my time working at. But if I wanted to relax and recline, I had to get into bed. That was the only comfy space. And there's not much scope for changing that on a boat because it's so compact and everything is fit in. So yes, to come to a free space where I can literally put anything where I want and design it to my needs is a wonderful challenge. And I tore my hair out at the time. But yeah, I think what I've come up with is a space that fits all of the things that make me.

Ben Adam-Smith 18:51

And it's interesting that with a fixed building, you're very much responding to the landscape around you. And I imagine that's not the same case with a tiny home that's going to move. So are the constraints more driven by this chassis and the trailer and so forth?

Jeffrey Hart 19:08

The big constraint, well, there's a width constraint, there's a height, but the big one that really, really has affected me most is that there's a weight limit. And that is a challenge that I've never come across as a builder before. And so I've got this huge spreadsheet of materials. You know, choosing my insulation. I was looking at all the different materials, what's their U value, but also, how much do they weigh? Choosing woodfibre over wool adds 100 kilograms to my weight. And I've tried to explain this when I was talking to people. I'd phone up people for advice, and they'd just laugh and go, "it's insulation, it's light." Well it's not, not when you add it all together. And then you've got a maximum limit of 2.9 tonnes. So 100 kilograms is a 29th of my weight budget. This is how I'm thinking,

Ben Adam-Smith 20:10

And that weight limit, where is it coming from? What's the problem?

Jeffrey Hart 20:16

It's because the trailer is rated for three and a half tonnes. You can buy a bigger, bulkier trailer but then you need a bigger, bulkier vehicle to move it.

Ben Adam-Smith 20:25

So is this quite a standard starting point, this particular size of trailer?

Jeffrey Hart 20:30

Yeah, absolutely. So seven metres is the length that you can tow. I think I'm right in saying this. Anything longer than seven metres as a trailer needs to be towed by a vehicle that's bigger than three and a half tonnes. So therefore, it's a step up in the moving process, should I ever have to move. Thinking about making it as simple as possible, if the eventuality that I have to move happens.

Ben Adam-Smith 20:56

So how have you been weighing things and thinking about weight?

Jeffrey Hart 21:01

The spreadsheet has been the big thing. When I looked around and I saw how people were building tiny homes, they were generally a stud frame infilled with some insulation, often spray foam and nasty chemicals like that that I don't particularly want, all full of thermal bridging and bad details and things like that. So I was thinking, right, I'm going to make this a showcase for natural materials and also good design. So I have wrapped the entire building in cork. And that's covered all of my thermal bridges. Also, it's added quite a lot of weight. So I've tallied all this up on the spreadsheet, and I realised that I need to make as much removable as possible. I nearly hit my weight budget, just by making a really well insulated, well-detailed building. So my kitchen is removable. I've just made a giant bookcase the size of one wall. All of that has been built to come apart so that when I have to move, all of that gets

loaded out, the fridge goes out, the cooker goes out, half the kitchen can be removed. This is the sacrifice to make a really well detailed building.

Ben Adam-Smith 22:17

I saw one of your Instagram photos showing the building wrapped with the airtightness membrane and knowing that you're going for the whole high performance. I'm not actually sure I've ever seen that in a tiny house before. Normally tiny house living is such a step into ecological living anyway. And yet you're bringing that performance with it. So are you a pioneer almost?

Jeffrey Hart 22:43

I don't know if I'm a pioneer. It became apparent looking at all the things that are out there, the YouTube and it's largely sort of American, and I'm not criticising American builders, but American or New Zealand, Australia, those areas are sort of big for tiny houses. And I feel like they don't necessarily have the same building science mentality that maybe European builders do. And so I really wanted to apply everything I had learnt in my career, building highly efficient buildings and putting it into the tiny house setting. I do think it is quite rare to do a full wind tightness, fully taped exterior, a proper, breathable airtightness membrane interior. I saw a lot of plastic vapour barrier interiors that then people put loads of screws through. So I saw a lot of examples which made me wince, that made me double down on this idea that this was going to be a showcase for how you can use really healthy materials with a little combination of building science materials as the minimum to create the optimum building.

Ben Adam-Smith 24:02

Because I think we ought to say that tiny house living, certainly from what I've learned over the last few years, is about the greenest way that you can live. Just reducing that space right down, it trumps everything else. The one question, I suppose that remains is whether it gets driven around a lot. And that can obviously complicate the picture but just assuming it's in one place for a moment. Do you think that it offers everyone comfort or it needs to be the right person living like this?

Jeffrey Hart 24:32

Well, I think I should say that, yes, it is very green in that sense, but also don't forget that it's on 600 kilograms of steel! I would love to build this house, this exact house, this size without the trailer somewhere. And then I would truly believe it was a super sustainable house, but the metal in the trailer is a big carbon emitter that can't be ignored.

Ben Adam-Smith 25:02

It can certainly be reused though at the end of its life. It's not as if you're getting rid of it. But then I guess that's all steel.

Jeffrey Hart 25:09

Yes, yeah, yeah. I guess I just wanted to highlight that it's not the perfect solution.

Ben Adam-Smith 25:15

Yeah, yeah. And there are always going to be things that you reflect upon. I know, in my own house build there's a lot of rigid insulation underneath us. All the airtightness membranes, that plastic. And I

really hope that one day, we'll look back and say, "Do you remember that time when we had all those plastic airtightness membranes?" Yeah, I just think for now, though, it does make sense. I can see why I've made those decisions.

Jeffrey Hart 25:39

Yes, no, I fully agree. Well I hope that we will always look back and think that was then. We are now better. That's the way you hope the progression goes.

Ben Adam-Smith 25:54

Did you have a full set of plans before you started on this? Bearing in mind that you're the designer too on this one.

Jeffrey Hart 26:03

I did not. I had the frame and the structure all designed out. And I had the size of my mezzanine and the placement of that. What I realised quite early on is that I don't have that architect ability to know what is a comfortable space just by seeing it on a floor plan. I knew that I needed to get the design 80% there. And then I needed to get inside and actually feel the space. Various things have changed since I've moved the woodstove from one end of the building to the other, because it was only when the space was there, that it became apparent that it was far too tight a space to fit a little stove in.

Ben Adam-Smith 26:51

Okay, we've got to talk about this - wood stoves.

Jeffrey Hart 26:55

I knew this was coming.

Ben Adam-Smith 26:57

Well, George, on Twitter, I said I was having a chat with you. And the question that he asked, with a little winky face, because he's been on that journey with his house. So I'm really interested where you are with wood stoves, what you're thinking.

Jeffrey Hart 27:13

Well, so I know that wood stoves are not good. Internal air quality, external air quality, getting heat from combustion is not the way forward. I also know that I am going to park this house in the woods, completely off grid. And for me to have an electric heating system that runs off solar is out of my price range by quite a considerable margin.

Ben Adam-Smith 27:45

Wait a second, wait a second. You've got a tiny house, you're sealing it really, really well. Presumably, this is going to take a tiny amount of heat. You know, possibly even body heat? I don't know.

Jeffrey Hart 27:58

Not body heat. Well, I don't know, actually. Currently I'm sleeping in here because I was sleeping in a caravan and I got too cold, even for the boat hardened me it was too cold! And it's currently, well it's

cold in the mornings if I don't have some form of heating. And I don't have the MVHR working yet. So essentially, I've got some big holes.

Ben Adam-Smith 28:27

It's going to be an interesting experiment, isn't it, to see what difference it will make having that MVHR on but I suspect you're right, you do need a heating source.

Jeffrey Hart 28:37

Yes, well, so I've thought about the wood stove. And I would absolutely love to get rid of the wood stove. That takes up some pretty valuable real estate in my footprint. I did put down, so I've got underfloor heating installed. I'm trying to future-proof that as the cost of solar comes down, that I could be running that. Maybe I won't end up living in the woods. The future is unknown and I could end up moving anywhere. So if I end up with a place with an electrical hookup then I'd be using that and then I'd love to get rid of the wood stove. But for now, to get me through it's a necessary evil, I feel.

Ben Adam-Smith 29:19

Do you notice a difference in the air quality when you've got it on? And also what difference does it make to the temperature? Does it almost go too much the other way or are you living in a nice comfortable even temperature?

Jeffrey Hart 29:34

I was very much conscious of opening the door and ash coming out and into the air. I noticed that straightaway. Temperature wise it heats up the space very nicely, very quickly.

Ben Adam-Smith 29:47

But too much the other way. I mean how much are you on target with what you'd like to be living at?

Jeffrey Hart 29:54

Well, I don't know because I haven't gotten the full system running yet. Because at the moment my ventilation pipes have got a little bit of insulation stuffed in, but they are largely just open holes. So yeah, I am running the system with the windows open essentially. So it's not true of its finished performance. So I'm as of yet unsure. Maybe I won't have to use the stove ever, and it would be a joy.

Ben Adam-Smith 30:19

Are you planning to do any monitoring once you're done here on carbon dioxide levels, checking airtightness, all the variables?

Jeffrey Hart 30:29

Yes, absolutely. I am a nerd. So I will be doing all the checks.

Ben Adam-Smith 30:36

We haven't talked about windows. I know you're going for thermal performance. But did you go triple glazed?

Jeffrey Hart 30:42

I have gone for triple glazed. Again, it's one of those things where I was weighing up, literally weighing up the options. And once I realised that I wanted this house to be an exemplar model of how you could do it, it sent me down this route of, well, you're going to have to spend a bit more money, aren't you! And yes, so triple glazed was an, I know, was it an obvious choice?

Ben Adam-Smith 31:07

Well, I suppose you're embracing the methodology, aren't you. And when you start to leave bits out, I feel that's when it all goes wrong. Let's say you forgot about the ventilation system. Well, then you have to resort back to trickle vents. And so I'm just going to be so intrigued how you reflect upon all of this at the end. Maybe we'll have to get you back on to the podcast.

Ben Adam-Smith 31:30

We started this conversation talking about plant-based materials and your love, that inspiration that you got from it. So what materials have you used in the house?

Jeffrey Hart 31:43

It's a standard timber frame. There is wood fibre insulation, wood fibre bats between the framing and then cork clads the entire exterior. The ceiling on the inside is also cork clad. I've looked very much at local materials. The flooring is all local ash from just 20 minutes away, the sawmill there.

Ben Adam-Smith 32:10

Are you insulated underneath?

Jeffrey Hart 32:12

Yes, oh my goodness, yes. The build-up underneath... A lot of people that I've seen, have insulated the bed of the trailer. So the metal trailer, they put insulation between. I didn't want to do that because of the cold bridging of the metal. So I built on top of the trailer. I built a box frame, filled that with wood fibre insulation. On top of that goes a layer of cork, on top of that goes the underfloor heating. And then this local ash floor. And the ash floor has come from a really beautiful little, family sawmill. When I went down to pick it up, they were saying, "Oh, yes. It came from this estate and it was planted at this time and it was felled at this point when they realised that the ash die-back was coming." So yeah, I had the whole history of this beautiful floor. That's especially important for me because I love the ash tree. And I'm devastated that it's being wiped out. So to have a little piece of it from its prime is a really lovely, lovely thing.

Ben Adam-Smith 33:21

You've talked about your flooring, that lovely ash flooring, but what else is inside that's not going to have any VOCs and it's just nicely specified?

Jeffrey Hart 33:32

Hmm, well, so a lot of the timber that's being used for work surfaces, the desk that I'm currently sat at, is all London Plane that was on the estate. It was a big old tree on the estate that was felled quite a few years ago now and it sat all planked up in a shed. When I arrived at my new home to start building I

was looking around and I thought, well, what's all that? And lo and behold it was this beautiful wood. I don't know if you've ever seen Plane wood, but the grain when it's cut, when it's milled along its radius, it's got this almost leopard print pattern to it. Absolutely stunning. I couldn't have a more local material to do my finishing with. So that's been a real blessing. I'm just going to have a look around and see what else I've got. Oh, I tell you what I should talk about. One of the big weight compromises I made was I've put a round wood timber frame, cruck frame in the centre of the house. And part of this build, and through my podcast, I've got on to this idea of biophilic design, using natural elements in your building, and the health benefits and mental health, your concentration and recovery, all these great things that come from seeing these elements of nature. So I really wanted to put a round wood timber frame in. And it's excessive, and it doesn't particularly hold any real function. I mean, it adds some stability to the build. But it's overall just there because I think it's a beautiful thing to live in a space with trees in their most natural form.

Ben Adam-Smith 35:28

You mentioned your podcast there, and I was definitely coming round to that. I've found my own podcast has been hugely helpful in learning, and enjoyable as well. So what made you set it up? And what are your plans for it after the house is complete?

Jeffrey Hart 35:45

Well, I think I set it up because I realised that I'd been building for a number of years and that I missed that learning aspect. Yeah, I was thinking back to when I was learning all about the building world. And I'd go and I'd work with different people, and I'd learn from them. And then suddenly I was running the building sites. And I was the one teaching people and I miss that learning and gathering of information. So I, on a very personal level, I wanted to do the podcast because I wanted to talk to really clever people and learn. I also was conscious that in my particular avenue, really focusing on natural materials, I didn't feel like it was that well represented ... your excellent podcast withstanding!

Ben Adam-Smith 36:38

To be fair, I mean, there are still very few podcasts in this area. There could be tonnes more.

Jeffrey Hart 36:46

Yeah.

Ben Adam-Smith 36:46

But as we both know, it's a lot of work. And maybe it's suited to some people more than others. You clearly enjoy having these conversations. And what I particularly love is, you ask loads of things that I just can't ask. You've been on those sites, you have the technical questions there. And I think what's most important, or I don't know how you feel about this, but it's just being open, just hearing different stories.

Jeffrey Hart 37:12

Yeah, very much so. I've tried to focus not just on building. I think some of the best episodes are when I go on a slight tangent and I'm talking to... a great example, I was talking to some people from an organisation called Full Grown, and they grow chairs. They use coppice and grafting techniques to

grow chairs, still on the tree. And then after so many years they cut it down, turn it upside down, and it's a chair. And just by listening to other people who are approaching sustainability in their own little field. And then thinking about how could that be utilised in building? And then you find out that there's a chap in Germany who is growing buildings, using basically the same technique. And he's growing buildings, growing the superstructure of a building using living trees, and it's a massive, long project, that's going to take years and years. But what if that is the spark for someone listening that then they take that off into their own micro focus. So that's where it really gets exciting for me.

Ben Adam-Smith 38:25

It's really difficult to get your head around a topic and how far ranging it actually is. And I remember Sofie Pelsmakers, who's someone who's been around this topic from the research side and doing all sorts of things, different fingers in different pies. And I think her point these days is that we're heading towards almost a super architecture, something that needs to encompass all of these things, yet be quite simple and straightforward, not too complicated.

Ben Adam-Smith 38:57

Just going back to the build, what's been the biggest challenge that you have faced?

Jeffrey Hart 39:04

Probably the biggest challenge has been being client and builder. I've done 99% of this build on my own, through choice. I really wanted to be, you know, very much a part of every part of it. But there have been days, just when I'm stood in the middle of the building, and everywhere around me is details that I have to solve or problems that I have to solve. And I'll start looking at one point, go, well, yeah, I could do this, I could do that. And then say, well, you know, that, of course depends on this part over here. And I turn slightly to the left. And I look at that part. And I start going through the problems with that detail. And then I say, well, of course that is reliant on what happens over here, and I turn slightly to the left again. And before I know it, I've come all the way around the building, and I've spent two hours solving problems that I never quite solve, and I get back to the beginning and go, I'm just doing it again. And I've lost probably days and days and days just getting distracted by seeing all of the things that need to be worked on, problems that need to be worked on.

Ben Adam-Smith 40:19

Do you face these challenges on some of the other building work that you've done for other people? Or is it all here's what's on the plans do that?

Jeffrey Hart 40:30

It's definitely part of the job that I really love is solving the problems and getting the logistics down. But I think it's the added stress of being the client. And also not having... normally I've got a team of people around me that I can say, "You go and work on this section while I look at this," and I can focus on it, knowing that something else is progressing to maybe the point where it makes a decision easier.

Ben Adam-Smith 40:59

That's interesting, isn't it? Because house-building is a team game. But largely what you've done, you've done it yourself, haven't you? It's a true self build.

Jeffrey Hart 41:08

Yes, yeah. I guess so, yeah.

Ben Adam-Smith 41:10

What does that mean for the timeframe then?

Jeffrey Hart 41:13

It means the timeframe is long. And it's been an interesting thing for me, because I've had to really reset my idea of what can get done in a day, in a week, in a year, I guess. Because I'm so used to different parts of a build happening at the same time, they all come together and fit into each other. But for me just building, I have to just work on one little thing, move on to the next, and keep going like that.

Ben Adam-Smith 41:46

What have you learned from it?

Jeffrey Hart 41:50

One of the interesting things has definitely been about airtightness. So predominantly, the buildings I build, the regular buildings are a timber frame structure with some sort of insulation that gets plastered, whether that's hemp, or straw, or wood fibre or things like that. And so my airtightness membrane has nearly always been my plaster. So to go from that to using an actual plasticity membrane, has made me think about the details of a continuous layer of airtightness. I think it's been really, really useful. And I think my plaster details will be so much better because of it going forward.

Ben Adam-Smith 42:30

Let's just round off our conversation today. I imagine there are lots of people who for one reason or another would like to live in a tiny house in the UK. What support is there? Did you use any websites? Or have you just been figuring this all out yourself?

Jeffrey Hart 42:49

I've largely been figuring it out myself. I think because tiny homes aren't so well known in this country or there aren't so many being built, I think it's actually one of the holes at the moment that there isn't a huge amount of support. And the builders I spoke to, they had found themselves scrambling around. You know, do I talk to The Caravan Club? Because it's sort of a caravan. And they have a way of doing all of their stuff. Do I talk to the house-builders, and it's neither of those things. And so there's this void, which I don't think is really very well filled at the moment. And now you're making me think that I should fill that void.

Jeffrey Hart 43:40

Well, it would certainly make sense. I think that's a really... on that life-changing moment, we round off this podcast, and I say, definitely go and check out Jeffrey and what he's doing. It's fantastic. And I would love to see more episodes and more knowledge sharing and learning and all the rest of it. And do you think a lot of time is going to come back to you once you complete your build?

Jeffrey Hart 44:04

I really hope so. I mean, I'm currently just dreaming of putting the sofa in and sitting around and not doing very much, which knowing me would only last a week and then I'd be bored.

Ben Adam-Smith 44:15

Well thank you very much for your time today, Jeffrey, and I hope to catch up again at some point.

Jeffrey Hart 44:20

Lovely, thank you, Ben.

Ben Adam-Smith 44:22

Get more in our show notes today at houseplanninghelp.com/312 where you can review all the main information. We always give you that summary. We pepper it with some images as well. So you can see the construction of Jeffrey's tiny house as it comes together into those final stages. We'll link you to the Building Sustainability Podcast, to Jeffrey on Instagram. All of this at houseplanninghelp.com/312.

Ben Adam-Smith 44:53

A couple of bits of business to finish up with. I just wanted to thank 'Nikki L H' for a new review in the Apple Store. "The most informative podcast on house-building. We're hopefully building our Passivhaus family home this year. And Ben's podcast has been invaluable over the last year. I started listening from the most recent but then realised I needed to go back to the beginning. I'm only on episodes in 2014. But I've already made a lot of notes and internet searches based on information I've heard. Thank you for all your time and hard work on this podcast." Nikki, it is a pleasure. And of course, every review that gets posted helps others find us, so much appreciated for doing that.

Ben Adam-Smith 45:38

If you've enjoyed what you've heard today, not only that, perhaps you want a bit more, well we have it in The Hub. And this is our membership community where you can network with like-minded people, we've got our members-only forum, we've got the courses to try and lay out some of the things that you're going to have to do, our live trainings with guest experts on specific topics. We've got the office hour calls, so you can connect with me, and our in-depth video case studies. And actually, I had little note to tell you about a new chapter of our Kinver story that we've added. So this is a retrofit project of Victorian terraced property. And at this stage, yeah some vital work going on here. They've knocked out the bay, because there were issues with it, but now they're starting to rebuild it, which is good news. At the back as well the timber frame is on the way up, and they've opened up that space in the loft. So you can see what the finished house is starting to look like. Trust me, there is still a long way to go on this one. But another interesting chapter there. If you want to find out more about The Hub, head to houseplanninghelp.com/join.

Ben Adam-Smith 46:45

Next time, Gwilym Still from engineers Max Fordham is my guest. And actually amongst other things, we're going to be finding out about who Max Fordham was. What made him so special? Thanks for listening. The House Planning Help Podcast is produced by Regen Media - content that matters.