

# House Planning Help - episode 297

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

This is House Planning Help - Episode 297. Hello, I'm Ben Adam-Smith and this is the podcast for you if you're interested in self build or renovation. 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 Guy Hargreaves. And we're going to be looking at why he wanted to retrofit his Victorian mid terrace property to Passivhaus standard. And we'll be looking at the steps that have got him to the build stage.

## **Ben Adam-Smith 00:31**

And as you're going to hear, in this particular episode, it was a visit to the National Self Build and Renovation Centre that got Guy deep into Passivhaus. And the National Self Build and Renovation Centre, it's such an asset here in the UK, definitely use it, we don't want to lose it. And Harvey and the team do a great job of just creating a mixture of events, courses, shows, I know I've been involved in several Passivhaus workshops, which is always a joy, I'm definitely happy to do that. So go and have a look, we'll embed the website address into today's show notes. So just scroll down to the bottom and link across and discover what's going on there. That's our resource for this episode.

## **Ben Adam-Smith 01:12**

So let's get to the featured interview with Guy Hargreaves. And every so often we like to take one project and keep tabs on it. You know, we'll be back. Mike Coe is our friend at the moment, who we've been checking in with a number of times. And we're hoping to make Guy a similar friend. So this just allows us to go into a bit more detail than we could in one particular episode. Also, the information and the feelings, they're all raw at that specific stage. So that's the reason that we like to do this. Guy's also done a project before albeit many moons ago, but I thought that would be a good starting point. So I asked him to tell me a bit about himself, and also his project from a few years ago.

## **Guy Hargreaves 01:54**

Well, I'm a Kiwi originally. And I moved to Australia, about 30 years ago, met my wife. And we married and had children and we bought a house in the eastern suburbs of Sydney. And we ended up renovating that rather extensively. We tore down two thirds of it and put a new second story addition. It was originally a Federation style, which I think in the UK you would call it a Victorian era single-fronted Federation cottage. And we built it into a double-fronted two-story Federation house.

## **Ben Adam-Smith 02:37**

Now, interestingly, my brother lives in Sydney. And so over the years, I've had a chance to go out there. And some of the buildings, I'm not talking about his specifically, but we went to visit a friend and oh my goodness! They had air conditioning on about a foot away from them. And it was still boiling. So when you did your upgrade there, what were you looking for?

**Guy Hargreaves** 03:00

We kept the front and very much the Federation style. But the rear was very much open plan and rather large sort of cavernous two-story ceiling, if you like. And we had ducted air conditioning, reverse cycle. So heating and cooling. I have to say that this was in 2001. And the science that went into the designing of the air conditioning was well, let's say it was no science. And I remember feeling quite nervous turning it on for the first time and wondering if it actually would be big enough or heat enough or cool enough. And as it turned out, it worked quite well. But really more luck than design to be honest.

**Ben Adam-Smith** 03:48

And then how did you end up in the UK?

**Guy Hargreaves** 03:51

Well, when my children were in the early teens, we moved to Hong Kong with my work. I was in the banking business. And we lived in Hong Kong for about 11 years. And while we were up there, my kids all left school and ended up at university and they ended up actually going to university in the UK. And so once my youngest son, who's now 21, left home and went to university in the UK, we decided we'd do what every parent shouldn't do and that is follow their children. So we ended up in the UK. It did help actually that my wife's father was English. And so she was a UK citizen. And we have, she has a lot of relations over here. I have a lot of relations over here too. So we do have family connections here.

**Ben Adam-Smith** 04:42

Now the climate probably is fairly similar to some of New Zealand like you didn't say whereabouts you were from, but how did you find it when you came to the UK?

**Guy Hargreaves** 04:53

Well, I was born in the lower north island. Yes, it is. It's cold. It's windy. The UK, where we live Oxford, is most certainly colder. But I did find it somewhat of a shock, I think because the truth is that I've been living for 30 years in Sydney or Hong Kong.

**Ben Adam-Smith** 05:12

Yeah, so very different.

**Guy Hargreaves** 05:13

It was a bit of a 'Back to the Future' really?

**Ben Adam-Smith** 05:16

Okay, and then explain your experience, no doubt you were renting when you first got here. And have you had any other properties and what have they been like?

**Guy Hargreaves** 05:26



Well, we were renting in Hong Kong. But actually, when we decided to move to the UK, we sold our property in Sydney. And we bought this property that we live in now. So we have never rented in Oxford, we were moved into this property. Initially, we thought, well, we'll just live in it for a year or two and see what we like and don't like about it, and then maybe do a little renovation. But when we started pulling back a bit of the carpet and looking at the walls and thinking about what we would do to it just make it liveable for a couple of years, we ended up deciding we'd live in the basement and actually get on with the renovation straightaway.

**Ben Adam-Smith 06:05**

So what was on your list? You're looking at a property, are you looking for a big project here? Or are you just looking for a home? And how much research did you do into that property before you bought it?

**Guy Hargreaves 06:20**

Well, we were looking for a home, we were thinking that we might be in the UK for five to 10, or maybe even 15, at the most years, before perhaps retiring finally back to Australia, subject to what happened with the kids as well. So we started looking in London. And then we thought we rather like the idea of a smaller city to live in. And my wife at the time was actually doing her masters at Oxford. And so we started looking at Oxford, and she spent probably a good year, maybe even 18 months, looking all over north Oxford, for the right place. And we settled on where we are now.

**Ben Adam-Smith 07:06**

And can you describe the building then?

**Guy Hargreaves 07:09**

Well, it's a mid terrace built around 1896. It's got a basement with a self contained kitchen/bathroom area. And then it's got ground floor, first floor comprising usual sort of rooms. And then it's got a bedroom loft. And it's in pretty decent condition, structurally, but it was in need of a full renovation from the perspective of the fittings and the painting and all that sort of thing.

**Ben Adam-Smith 07:42**

And how much of this learning, before going into the renovation and retrofit, did you do versus how much did you lean on the experience that you'd had before?

**Guy Hargreaves 07:54**

Well, we probably initially, were leaning on the experience we had before and the sense of, we had torn down a reasonable amount of building we had built extensions. And we had renovated internally and done floors and all that sort of thing. So we were quite confident that we had been through that process before, with all its difficulties and the like. But the one thing we hadn't done was think deeply about low energy building. I mean, our property in Sydney was single-pane glass, and really no thought to much more than building standard insulation.

**Ben Adam-Smith 08:36**

So how did this come onto the radar, then?

**Guy Hargreaves** 08:39

Well, I went down to the National Self Build (and Renovation) Centre for one of its Passivhaus days, and actually met my architect Alan Budden and was chatting to him a little bit about it. And I just steadily became more interested in it. My background, I studied mechanical engineering at university. So I almost feel like I'm coming right back to my teens and 20s, my late teens and 20s, thinking about thermodynamics and low energy build. The Passivhaus process, the Passivhaus concept itself really grabbed my imagination, to be honest. And I was hooked, actually.

**Ben Adam-Smith** 09:23

So it sounds interesting. From that general open day, then you started chatting with Alan, and Alan has ended up being the lead on this project architecture wise, hasn't he. So how did you develop that relationship? How much further did it go? Were there other people in the frame?

**Guy Hargreaves** 09:43

Yes, well, actually, we moved into the property in I think sometime around October 2019. And by December we decided, yes, we would definitely renovate and go down that path but we actually originally hired, what you might call a more conventional architect who had done work on terraces like ours in the area like us. And he did the original design, which was very much a UK building standard based design, not Passivhaus at all, and put it into council early December, and by late January, we had that approved. And during the period when the plans were in council was when we really started thinking, why don't we refocus this to be a low energy build. So by the time we got our approval back from council, we were already considering hiring Passivhaus architect for one of a better term. So we discussed that with our original architect and I guess he was a bit disappointed, but nonetheless, didn't have the background of the skill set to do the Passivhaus design.

**Guy Hargreaves** 10:54

It was quite difficult in a way, because there were no... I would have, in some respects, I would have preferred the architect to have been living a little closer to Oxford. Alan, as it turned out, was in Milton Keynes, which is only a 50-minute drive away. So it's not too bad. But interestingly, Oxford doesn't seem to have a lot of professionals focused on Passivhaus architecture or Passivhaus providing services to the industry, living locally.

**Ben Adam-Smith** 11:25

I think it's also changing a little bit, working with an architect. For my own project, for example, I did something very similar to you, I had an architecture firm that were quite a few miles away. Now I did have choices closer to home. But I think you can make it work in that relationship, particularly if you're only doing the first few stages, because the number of times that we actually met with our firm, were very few and you can do everything else online, which I imagine is what you're finding.

**Guy Hargreaves** 11:58

Well absolutely and of course along came the pandemic in March.

**Ben Adam-Smith** 12:01

Oh yeah.

**Guy Hargreaves** 12:02

Which meant that it really wouldn't have mattered where our architect was because we weren't mixing households. And so we've done most of it on Zoom or over the phone. And that's been fine, really.

**Ben Adam-Smith** 12:15

So tell me then about the pandemic. It's not something that we've talked about many podcasts. And I'd love to say that I'm glossing over it, but I probably should ask, you know, what did it do to your progress in the project? And how did it impact?

**Guy Hargreaves** 12:32

For a start Alan's firm ended up all moving home, to a work from home model. And we probably lost two to four weeks, something like that, just in that move. But apart from that, I don't think that the pandemic at our phase of our project has altered the timing much.

**Ben Adam-Smith** 12:52

Yeah, that's interesting, isn't it that you're saying it hasn't really affected you at all, by the sounds of it. Yes, at the beginning, I think everyone was having to readjust. So that is beforehand with COVID. What are you thinking for your actual build?

**Guy Hargreaves** 13:08

Well, yes, that's something that keeps both my wife and I up late at night, to be honest at the moment. So we are on the verge of moving into a rental, in fact, I signed my rental agreement this morning, and hoping to start the build in the next two weeks.

**Guy Hargreaves** 13:27

So it's fair to say that we'll probably be starting close to the peak of the pandemic in the UK as you could possibly time. If you assume that over the next, say, three months, the vaccination programs will be steadily rolling out, it's probably not unreasonable to expect that we're plus or minus a few months from the peak right now. And that's when we're starting.

**Guy Hargreaves** 13:48

Obviously, I'll be doing my best to be very careful both moving out of the property and interacting with the builders on site when the works start. And, you know, it would seem like a very good bet that at some stage, somebody connected with the building site will end up with COVID. And whether that closes down our building site, I'm not 100% sure, but I take comfort from the fact that the vaccination program is being rolled out and that the government seems extremely committed to rolling it out. And I honestly believe that once rolled out that will make a huge difference to the pandemic in the UK.

**Ben Adam-Smith** 14:27

I think something else in your favour is that you'll be in the early stages of your build, which largely is a lot of ventilation. You could be creating holes here, there and everywhere, and with every day that goes by, we'll be coming into the spring and hopefully things will be improving. So it's just interesting, isn't it? You'll be on an adventure.

**Guy Hargreaves** 14:51

I will be on an adventure. I'm pretty sure about that.

**Ben Adam-Smith** 14:55

Okay, now rewinding a bit, we skipped over a lot of details. So planning first of all. I don't too much about this. When you're having a deep retrofit of your home, what sort of planning do you need to have to get that to go ahead or what you got initially will be fine, just with a rejig the plans submitted?

**Guy Hargreaves** 15:17

Well, we have actually been back to council since the initial plans were approved but very much on a, I wouldn't say minor variation, but not significantly more than minor variation basis. For example, the rear extension on the ground floor, well and the first floor... On the west side, we contemplated building away from the neighbour's property, but it was far more efficient to build on the party wall from a perspective of insulation, etc. so we've gone back to council for approval to do that.

**Guy Hargreaves** 15:55

But really, one of the original principles that we started with was that - especially from the front of the house - we don't want the building to look much different if any from what it looks now. We're in the middle of a three terrace development and all three of the terraces have a very similar look, with just a little asymmetry. And you know, the obvious asymmetry you would imagine. So, for example, we don't want to replace Victorian sash windows, with anything that doesn't look like the Victorian sash window that's there now. So on that basis, we really tried not to do much externally to the property at the front. At the rear, obviously, there's some extensions going on. So that was already approved. We think the fact that we're renovating to a Passivhaus certification didn't appear to be anything that the council needed to be advised about in terms of the plans themselves.

**Ben Adam-Smith** 16:58

What has driven the target being the Passivhaus standard rather than EnerPHit, the retrofit standard?

**Guy Hargreaves** 17:05

Well, my sense early on was that if you're going to renovate to EnerPHit, then probably getting the Passivhaus wasn't a much heavier lift. Now, that may or may not be the case, we'll see. But to be honest, it's the passion I have for the Passivhaus certification than anything, I'm not sure that the internal feel of the property will be much different if it was renovated to EnerPHit certification.

**Ben Adam-Smith** 17:37

Now, I know that you mentioned your engineering background, so can you take us through how you're going to achieve this.

**Guy Hargreaves** 17:46

So each element of the internal, well the form of the building will be treated slightly differently. For a start we're working with a very efficient form, I mean, it's not exactly a rectangular cube but it's not far off it. So the form factor is very good for a start. The party walls don't actually require additional insulation, the front and the rear of the property that are the existing walls will be internally insulated. All glazing will be replaced with triple glazing, the roof will be in part removed and in part insulated internally. The floors on the ground floor at the rear will be dug out and a new concrete slab set on top of insulation materials. The basement floor will be, the top is going to be taken off and a Diathonite screed put on for installation. And the whole place will be wrapped, if you like, internally with like an airtight layer. That airtight layer will come in the form of various materials depending on what part of the building you're talking about.

**Ben Adam-Smith** 19:01

When it came to cost, were you at all worried? Because it's one thing going to these Passivhaus talks and thinking 'oh, yes, my renovation project, I'll turn it into a Passivhaus'. But were you ever deterred? Or how did you weigh up the cost versus what you're going to get for it?

**Guy Hargreaves** 19:19

Yes, cost has been a significant talking point in our household to be fair. All the way along we've tried to think about the cost of doing what we're doing now, if we were to just insulate it to UK building standards, versus attempting to get to Passivhaus certification and there's no doubt that the Passivhaus certification is adding a decent chunk of cost.

**Guy Hargreaves** 19:44

And I think the way we've thought about this property all along is that for a start, we bought it at a price that reflected the fact that it needed a full renovation. And we believe, I believe that we're renovating our property to future proof against the impact of climate change, to future proof it against the impact of potentially rising energy costs. And not only that, the increasing comfort level just in living here, renovating it the way we do, should have a value in the marketplace.

**Ben Adam-Smith** 20:20

Well, one of the nice things is that you very generously allowed us to stick with the story. So this is just part one of what has been happening. And so we will hear what you think at the end after you spent all of this money. Just moving on then to how you found builders and anything that you've learnt along the way. So what did you do? Was this a tender process?

**Guy Hargreaves** 20:46

Yes, we tendered to five parties. We got four tenders back. I think we had a pretty reasonably narrow range of tender sums. So I think the tenderers very much understood what we were trying to do. And we probably haven't gone with the cheapest tenderer.

**Ben Adam-Smith** 21:08

Why not, out of interest?

**Guy Hargreaves 21:10**

We were just a little concerned that perhaps it looked cheap at the start, and that it may not end up being as cheap as appeared. Because we need a lot of attention to detail on this job if we're to succeed, especially on the airtightness, I think. In the end, we've selected a local builder that has done significant renovations, even as close as the street across from ours and that really is interested in developing some skills in Passivhaus.

**Ben Adam-Smith 21:43**

I think attitude is such a key part of that. So that sounds like you've got a good one there. Did you struggle to compile your list in the first place? How easy was that?

**Guy Hargreaves 21:56**

It wasn't easy. I probably ended up with a list of 15 or 20 builders. I looked at, you know, various websites. My wife and I love to walk our dogs in the morning and we walked all over Oxford, and we've looked at all sorts of builders doing building works and picked up some names there. We had some suggestions that we investigated from Alan. And in the end, I think we've got a good range of people who have come back on our tender.

**Guy Hargreaves 22:26**

Look, I think it's fair to say that the number of firms with experience in doing the sort of job that we're asking a builder to do is very limited. So I think you're absolutely right. It's all about the attitude. You know, if you've got a builder that has experience, and that has an attitude that they really feel that this is the way renovation will be done going forward or increasingly done in the future, then it makes sense that they want to start developing that skill set and have their portfolio reflect that experience. It's as much about future proofing their firms as it is future proofing our property.

**Ben Adam-Smith 23:07**

Well maybe finally, is there anything else you've learned along the way that you feel might be useful to us? Or any comparison to your previous projects? What are you thinking?

**Guy Hargreaves 23:19**

Well the one thing I would say would be that because you are not only trying to balance cost, quality, speed, but you're always trying to balance what you want to do stylistically with what the PHPP model will let you do. So that becomes a fourth dimension, if you like. Everything you do has an impact in terms of, will the building perform the way you want it to perform? And so that just I think requires thinking in a different, you know, in an additional dimension, if you like.

**Ben Adam-Smith 23:56**

Well Guy it's been fantastic to get some background on the project and the story to date. So are you okay, if we catch up with you in a few months?



**Guy Hargreaves** 24:06

Certainly, certainly. Look forward to it.

**Ben Adam-Smith** 24:09

Head online to take a look at the show notes for this session, where you can review the key points. We've also got photos of the existing house. Plus, you can take a look at the plans of exactly how it's going to be adapted. Maybe you got a comment or you'd like to ask a question. Do that within the show notes or on social media, all within the URL I'm about to give you. We've got links to Eco Design Consultants as well. That's Alan. And actually, this is one that we did last year, my production company Regen Media produced a video about Carrstone Passivhaus. So if you haven't seen that, it's well worth checking out and we'll embed that at the bottom of the show notes as well. This is a Passivhaus Plus project and fascinating to see all the design aspects that get it to that, and then all the little bits on top like the electric car and I think they're paying, or no they're probably being paid money to live in the house, which is always a nice scenario to be in. [Houseplanninghelp.com/297](https://houseplanninghelp.com/297).

**Ben Adam-Smith** 25:07

My call to action is to check out The Hub. And this is where we continue the learning really. It's our never-ending mission to build up the archive with useful resources. And part two of this is to tailor it to you, to where you are in the project. If there's something we think, well actually you need to check this out first, which is why it's very interactive. I'm always chatting to self-builders. There's also the other members in our forum that you can get chatting there. We've got our live trainings, our community calls, office hours if you want a one-to-one with me, so find out what it's all about. We just want to help you further. [Houseplanninghelp.com/join](https://houseplanninghelp.com/join).

**Ben Adam-Smith** 25:44

Thank you so much for listening. We'll be back again. The House Planning Help podcast is produced by Regen Media - content that matters.