

## Episode 267

# Self build tips, eco design and the climate emergency – with Kevin McCloud from Grand Designs

The show notes: [www.houseplanninghelp.com/267](http://www.houseplanninghelp.com/267)

Ben: I think I'm going to start this one in a slightly different way to many interviews I do, with a thank you.

Kevin: [Chuckles] Well, thanks! That's very nice to hear. It's nice to hear because television is such an ephemeral medium. It's basic electromagnetic radiation, you know?

And I'm at this slightly vulnerable point in the year where yesterday, I did almost the last voiceover – I've got one more to do – for this series. That last minute stuff. And it's for the programme that goes out tomorrow night. And someone said to me the other day, 'how many of the current series have you seen?' I said, 'none.' Because I'd been travelling and sitting on trains and voicing and writing because it's just a crazy time of year.

And we don't actually produce a series at a time; we've got all these projects out there. But you suddenly realise a series has gone out and all that work – and some of these projects go back years and years and years – has gone. And you think, 'oh right. That's over with. Done, fine. We move on.' And it's not as though you even actually get to sit down and watch it.

I'm very mindful that it takes a long time and a lot of people are involved. It's a huge collaboration. So, to be told that actually it has a kind of impact is rather lovely.

Ben: I'm glad to hear it. And the media background side of me has just a few questions. How many projects are you following? What does a typical year look like in terms of stepping in when you do your filming days?

Kevin: I tend to film a maximum of three days a week. They're very long days, sometimes fifteen hours, and I've got other things to do as

well. And I'm getting older as well, I should add that. But the busiest time actually is between May and October.

The lovely thing is, May is Grand Designs Live at ExCel in London, and I know things are really hotting up when I'm there; filming is really hotting up. And then right now is like kick rollocks scramble. It's a really hard time in early October because we've got the House of the Year following Grand Designs. I'm still voicing that and we're still writing that. But actually, I know that in about two weeks' time, things will get a little easier.

So, autumn is good for me. And I tend to have quite a quiet winter. I tend to hibernate a bit.

Ben: Very wise. And then this year you had The Street too.

Kevin: Yes, that was an added complication. That was another series we did which was in the spring and that was very much self-build, very much focused on affordable self-build, set in Bicester at Graven Hill which is going to be a self-build site of some nineteen-hundred homes. We're going to go back and make another series with some other people.

Ben: Are you? Interesting.

Kevin: I'd really like to follow a community self-build co-housing, so we may actually broaden our remit there and do a lot more social stuff and increase, if you like, the affordability bandwidth. And that really interests me.

So, that's very exciting and that's going to take another eighteen months to two years to do.

Ben: I was going to say, if it's co-housing, that'll be another ten years before that can be...

Kevin: Yes, it could be.

Do you know? In our very first series, we had a wonderful community housing project in Brighton called The Hedgehog Housing Co-op. It was a Walter Segal construction method. It's beautiful. One of the most significant films we've ever made, one of my favourite, absolutely, and it's still going. All of the original ten households are still there.

I thought we're going to have one of these every series; it's going to be amazing. We found one more. They're really hard to find. It's a shame.

Ben: How much do you steer things then? I guess having done a couple of decades, more-so than the original days?

Kevin: Well, I don't know about steer...

Ben: Well, pick things that you would like to cover. I know what it's like. I've visited lots of projects and there are certain themes that crop up. And then once you've seen them once, for your interest...

Kevin: Yes. You can only film so many oak frame buildings, so many white modernist boxes. And we sort of have a moratorium on some of these tropes because it's very hard to tell a story if you've told it before. And Grand Designs' longevity is down to our ability, I think, to try and find interesting stories.

Whether they're about Passivhaus construction, a new type of this, a technology, designing for disability, or designing for the third age; whatever it is, it has to tell a story that we haven't covered before. And if it doesn't, we're in dangerous territory.

And we're in dangerous territory actually for one very important structural reason and that is, that we don't know whether a project is going to take eighteen months or three years. Therefore, we don't know if we're going to end up with two almost identical water towers in the same series. And that's quite an important driver that we do seek out that diversity.

Ben: When we're talking about ecological projects – I haven't given you any advance notice here – but what comes to mind? Or is it just all a blur of the decades of projects?

Kevin: Oh no, in terms of the projects we've covered, the things that I really have enjoyed are projects like Ben Law building his house out of his own coppice timber which was, by the time it had regrown after eight years, made his house effectively carbon invisible. And that was a beautiful story where nothing went wrong to create a fabulously beautiful house. We did this in 2000/2001 and it's remained one of my favourites and one of the viewers' favourites for all that time.

It was a film in which the word sustainability was mentioned once by Ben and I thought that was great. It elegantly told the story without hammering it on people's heads.

We also made rather an amazing programme about that remarkable self-build project in Wales, the Llammas Project, following one couple there, the founders. So, that was a really beautiful film again about super low-impact living and lifestyle. It

was as much about lifestyle as it was about the architecture. Because we can all build.

It's rather like ecological cars. They don't exist. There's no such thing as an ecological car. It doesn't matter whether it's full of batteries or it runs on dog poo. The point is, it's all about our consumption and use of vehicles that determines whether their use has an impact on the planet. That's where fundamentally the largest amount of environmental impact happens, is in use. And it's the same with dwellings.

So, you can build yourself an eco-house but if you continue to drive fifty miles to work every day and continue to live an exorbitant lifestyle, it doesn't really achieve very much.

They say about the British that we're very good about determining the temperature of our homes by basically whacking up the heating to full and then controlling the temperature by opening the windows. Whereas the Germans treat their houses like machines.

Now, you live in a Passivhaus and in a sense the success of Passivhauses in Germany – and there are thousands of them in Germany as opposed to dozens of them in the UK – is down to the fact that people really enjoy actually tuning their building and tuning their lifestyle to the building as well.

Ben: There's still a little bit to do. I always say it's a very boring house to come and look around because you don't see very much. The MVHR is about the one thing on show that says it's something slightly different. And then the only side that reminds me a little bit of sailing is just controlling so that you're not overheating in the summer, just cooling things down first thing in the morning.

That's a theme that you've seen more of through the series?

Kevin: Yes, in my own business, in HAB, and throughout the series, I've always been interested in projects which are intelligent buildings, by which I mean that effectively it is built into the fabric. Rather than what many of us, particularly men, love to do, which is to bolt machinery onto what we've got.

The idea of retrofitting complex machinery to a building, or even actually installing it in the first place, is just a hiding to nothing. All it's doing is creating a whole load of work for yourself and expense.

Whereas actually, a fabric first approach is glorious. So, if you build out of materials which are going to trap the heat of the sun, which are going to shade you in the summer, which are going to provide

you with healthy air and recover the heat loss from that air, then you've already made such a vast improvement. And you can do this by choosing the right materials in a very intelligent and relatively ecological way. And those buildings which do that passively are a preferred interest to me. Because that's really intelligent. Banging a load of stuff on it is not.

It's like the argument about the Americans and the Russians in their Space Race. The Americans spent tens of thousands of pounds developing a ballpoint pen that would write upside down in space, and the Russians used pencils. I don't think that's true but I just love the story.

Ben: That is a good story. One of the things I was going to ask you about was the Climate Emergency and how architecture has to change. One thing I quite like about Passivhaus often is the simplicity that you're building a simple fabric of the building. Sometimes it's quite a simple form as well. That's not saying it's boring; you can have beautiful buildings.

So, how do you feel architecture needs to change to address the Climate Emergency?

Kevin: I was watching a film the other evening on television and the film stopped and one of those kind of screensavers came on. It was one of those aerial views of Dubai looking down at all the buildings. And what you saw was this kind of desert in which these multi-storey buildings exist, walled with glass. And because they're walled with glass, the roofs are covered with thousands of air conditioning units working overtime to try and cool the building.

What you see is energy going into the building in the form of sunshine and then more energy being used to cool the building; to remove the energy that's gone in. When you think about it, that's just bonkers, isn't it?

I remember my youngest daughter, when she was young, she said to me, 'dad, what happens to the heat in the house when the house goes cold at night?' I thought about this and I thought, of course, the rules of thermodynamics dictate that actually, nothing happens to the heat. It doesn't disappear. What happens is, it leaches through the fabric of the building, out through the windows, out through the gaps in the doors, and makes its way up into the atmosphere as thermal energy.

We're used to this idea that we just keep burning fuel in order to stay warm as though that's its role. The role of fossil fuels was

never intended by the gods that the material should be used by us. What we did instead was, we basically dug all of it out of the ground, set fire to it for a couple of hundred years, just to see what would happen.

And we now know what happens.

Ben: We can't let go, can we?

Kevin: I know. We can't let go of our dependency on it.

So, there's a sort of craziness in there. And our responsibility as architects and as builders is to be building buildings which are super-efficient in terms of how they use their resources, how they use energy, and how in doing that, they also deliver a quality of life that makes their arguments utterly compelling.

The difficulty I have with Extinction Rebellion is that not all of us are going to agree with the defacing of a building with food dye. There's a natural revulsion at violence and aggressive acts. And equally, at the same time, we all understand perhaps the drive and the arguments and the agendas behind that.

So, every sympathy, but at the same time, my role is not to hire a fire engine and squirt red food dye at the Treasury. My role is to persuade architects and to persuade us all as consumers that the best thing to do is we build and we use and we consider the resources of the planet in such a way that we are truly and holistically sustainable in terms of the air we breathe, the woods, the forests, the fish, the water we drink. But also, actually, the ecosphere, the plants, the other species on the planet with which we cohabit this Earth.

It's a big and complicated argument in architecture and in architectural terms. My role in my business has always been to try to design and produce places which are great places first of all, which feel as though they're places where people want to stay and build a community, where their homes cost next to nothing to run, where we use all kinds of clever tech like high thermal mass, MVHR, heat recovery, triple glazing, in order to achieve the best possible physical envelopes for these buildings. But at the same time, the architecture, the experience of being in these buildings should also be uplifting.

There's no point building passive homes for everybody if they're going to be rabbit hutches. As it is, we build rabbit hutches anyway. So, we can do a lot better in terms of quality, in terms of the experience, but also in terms of the performance. And the

contribution that architecture and development and public realm design makes towards community, towards placemaking, that for me is a very big agenda which so many people haven't latched on to in development.

It's the idea of how you use the spaces in between buildings to create social sustainability which has in itself a collective reduction in demand on the planet's resources. In other words, if you share an allotment and you grow your own food; if you join a car club because you know your neighbours and you want to do it; if between you, you buy a bicycle for the street; or buy one trampoline for five households for the kids; or one shed; or one lawnmower between five homes; what you're doing is actually, you're sharing cost, you're saving yourselves loads of money, and you're also saving resources and making your collective imprint on the planet lighter.

Ben: Everything you've just said makes me think that co-housing series needs to start sooner rather than later.

Kevin: Yes. It would be nice, wouldn't it?

Ben: But one thing that I always struggle with is things like thermal bridges. I don't feel a lot of architects can even identify a thermal bridge.

Kevin: [Laughs] certainly, I don't think many people listening to this will have heard of thermal bridges either.

Ben: Well, I bring an educated crew with me.

Kevin: Oh good. Good, good. I think architects do understand the concept. I think their solution is so often to say, 'let's just wrap some high-density polyurethane foam around it and just hope that we've covered ourselves.' In other words, we've reduced the thermal bridge effect but we haven't eliminated it.

Ben: Sometimes I would say they don't even think that. Just build what they want to build.

Kevin: Yes. So, I think that the role of environmental engineers is underappreciated in architecture. A great friend of mine, Patrick Bellew is an environmental engineer and started Atelier Ten. And he's very funny on this subject because I think his view is the same as yours.

I couldn't comment.

Ben: Coming back to Grand Designs then, and also thinking if someone is starting out a project, how should they research it?

Kevin: That's a really interesting question. The thing about architecture that makes it so compelling and fascinating is that it results from a drive to try and make the world a better place, to improve it and to create the world in our image. Which of itself, given everything we've been talking about, can be a dangerous motive. But at the same time, when we do it well and properly and responsibly, can also be very noble and can ennoble us.

So, I suppose most people think about self-build as some kind of collection of ideas when they start. And often, those ideas are to do with baths, taps, kitchens, dishwashers, sofas, lights, door handles. And people almost assemble their notional home from these grains, these bits. Which of themselves can be very misleading, very expensive and very distracting. And actually, architecture isn't interior design.

I think what architecture is, is a process of design which is very good at resolving all kinds of issues to do with how buildings, places respond to where they are, to site, to the environment, to their location, to the passage of the sun, to how they function in engineering terms, but also how they provide uplifting and exciting spaces for their occupants that lift the spirits.

And here we shouldn't confuse square metres with cubic metres of happiness. It's not as though one is related to the other. Size doesn't equal happiness. And indeed, size doesn't equal a sense of space either. Because if you have a very large building with small windows, it will feel far more claustrophobic and prison-like than a small building with larger windows that gives you a connection to sky or landscape.

So, it's the idea of connection to the outdoors and to the natural world, which is important, I believe. And equally, some really clever space-saving ideas, storage ideas. The way you use a staircase; the way you use cupboards in a wall; the way you build stuff in; the way that you provide full height storage cupboards; attic use; outdoor storage space for the stuff that doesn't need to be actually kept in the thermal envelope like a canoe or a bicycle. It doesn't need to be kept indoors nice and warm. I think architecture is very good at solving these problems and I see it as very much a problem solving tool and process which has got nothing at all to do with taps.

Ben: What do you provide then at Grand Designs Live? I certainly went to one; possibly more than that during my research period. But what can we learn if we come along?

Kevin: There are some amazing taps. We've got some great taps.

Ben: [Laughs] any discounts?

Kevin: [Laughs] you'll have to speak to the suppliers. Hang around until the last five minutes of the exhibition.

The show is a mix of so many things. So many makers, so many retailers. I suppose the one thing that I'm very proud of with the exhibition is the fact that the tangible quality of the stuff is evident. Because you can't understand the quality of anything unless you touch it, feel it, examine it, play with it, handle it, and hence the exhibition is very important.

But it's also an exhibition where there's an opportunity for the exchange of ideas. We have a big area devoted to – it's called 'Ask the Expert' where people come and bring photographs of their loft extension they're planning, or their kitchen, or they're retrofitting a garden shed, as much as the one-off self-build, where they can meet one of dozens of experts who will happily give up their time for the five days to come and help them. And that's a really important, rather lovely and very generous act on their part to come and support the show and provide the service effectively for free for all of our visitors.

We've got a stage; we've got loads of stuff happening in the theatre. My Green Heroes, lots of innovation trails, lots of different buildings made from different materials. We've got a house made from six-thousand milk bottles, used ones, which deals with the issue of plastic waste and it's a great thing to look at, understand and explore.

I'm not suggesting we would all go away and build a house made out of milk bottles, but it represents a very important aspect of the exhibition which is that yes, you can engage with stuff that you can buy now, that you can use now, that you can design with now, but we're also showing you stuff which is around the corner and stuff which is not; which is way out there but which one day actually might be around the corner or might be for sale by one of the exhibitors.

We've got exhibitors now selling stuff, selling products made from biotech grown fungi, you know? Or coffee cups made from coffee grinds recycled. Or cladding made from hemp and sugar resin.

They're selling this stuff now on stands whereas two or three years ago, these products were in our Green Heroes section.

So, just as on television you see our Grand Designers as experimentalist, investing in tech ideas and innovation in a way that no developer ever would – we're very grateful to them for doing that – also the exhibition gives us a chance to do that as well. And I really enjoy that because for me, I'm quite a techy person; I quite enjoy not the heavy electronic stuff but I really like innovation. I get a lot of energy and excitement from that, of what's around the corner.

Ben: You can always learn, can't you? Do they still have that bit where there's a corridor that plays the Grand Designers music as you walk down? I don't know why; that always sticks in my memory because it's twenty seconds and they put it on a loop.

Kevin: Yes, the Tunnel of Love. The Tunnel of Grand Designers Love.

Ben: I'll take that as a yes then.

Kevin: Yes. Well, you imagine what I think about that.

Ben: You never go that way.

Kevin: I hear the theme tune and I come out in hives.

Ben: How do you spend your time? Are you there every day, or just at the beginning and close?

Kevin: No, I'm there for half the weekend and for most of the week as well. I'm glued to it. And very proud of it. It's a fun show; a fun thing. It also for me is an opportunity to meet my audience because I don't normally get to see the customer.

Ben: What's the most common thing that you get asked?

Kevin: 'Can I have a selfie?'

Ben: I can understand that. Talking of 'can I ask', we've got a couple of listener questions here. I'm going to read those out.

First up, Tim Alsop says, 'how do you expect or want self-build to be in the UK in ten years from now?'

Kevin: I'd like to see it widespread. I'd like to see it facilitated by local authorities. I'd like to see dedicated sites, communities of self-builders working together.

I'd like to see it affordable, by which I mean, not simply affordable in the sense that the government defines it, which is for many people unaffordable. But I'd like to see co-housing community schemes, community self-build. I'd like to see local authorities and I'd like to see housing associations working with groups of their residents as clients to build either blocks of flats or terraces or whatever.

But through community you get a far greater sense of attachment to place and a far greater sense of empowerment. I've seen people be extraordinarily empowered; people from very difficult circumstances and backgrounds; people who have been homeless become enormously empowered and energised through self-build. A life changing experience for many people. I'd like to see that available to many, many more.

So, for me, that's the next thing. Because I think we've pretty well established now that the middle classes can go out and build themselves a nice four-bedroom home for themselves.

Ben: I bet one of these questions will be on, 'it's all too expensive.' So, let's have a couple of questions on if you haven't got much budget. Can you still make it happen or are you saying community is the way to go because then that does actually naturally reduce your overheads?

Kevin: Well, yes, I think the issue of land availability, the size of our country, our population density, which is the highest in Europe, and historically a planning system which is regulated against the individual and regulated in favour of large developers, means that we've ended up with six major housebuilders in the UK controlling the market – whereas in Germany it's hundreds and hundreds of small companies and self-builders – and effectively a delivery system which is unviable and systemically doesn't function.

So, what do we do? We empower people and we do so in as many ways as possible. I'm not suggesting that we have a future entirely dominated by self-build or entirely dominated, for that matter, by community self-build. But I am suggesting that diversity of offer is one of the first big steps you can achieve towards a healthy market. And when you get a diversity of offer, what follows is a diversity of delivery system.

So, the idea, for example, when you put together, say, fifty people from a community and there's one landowner or the council owns some land, what does that mean? Fifty people are wanting to build something together. That's a very strong constituency there. What happens if even larger numbers of people in communities want to

do it? That places a demand and a pressure on local authorities to deal with their land assets in an entirely different way.

If you talk to people in central government about what the value of land is and what the asset value is of land owned by government and owned by, say, the NHS, the MoD, land disposed through Homes England and available to local authorities, very quickly in the conversation you turn to the question of whether or not actually there should be any financial value even attached to land in public ownership. Because the net social capital that can be created by people building together, creating a community together, spinning together that magical community spirit, the social capital there is immense.

And if alongside those schemes you're able to implement other schemes such as car clubs, you're able to improve bicycle routes, public transport because of the critical mass of the demand for that – if you're able to encourage sharing in the community in addition, then you've increased the social capital even more and you've reduced the impact of what you're trying to do even more.

So, there's a good argument to say that actually if you can bring down land values to the extent that allows you to kickstart a process, then you win, win, win. And you go to somewhere like Freiburg in Germany or the Dutch self-build schemes, you can see that immediately. And you talk to politicians in Europe now and they are absolutely clear in Germany, Austria, Denmark, Scandinavia, even France, how schemes can radically alter the net pound note wealth but also the social capital of a place. And that is really what local government wants. That's what it's there for. So, I have no problem about that.

Ben: Claire Litbell says, 'will we ever get green builds with low chemical products as standard? Brilliant programme.'

Kevin: Thank you Claire.

We did make a film in last year's series about a couple building a home for their two children who have extreme allergic problems. The kids would go into anaphylactic shock and be hospitalised regularly. And what was extraordinary was that actually yes, in building this home with MVHR, pollen filters, and lots of low VOC products – low VOC insulation, paints, glues, carpets, timbers, boards and so forth, it seemed to make a big difference.

They've done quite a lot with York University who came and measured the environmental performance of the building and specifically the VOC levels, and the results were quite staggering.

So, it's worth looking at. It's on All4. You can actually look that up. Because all of the products are there. A lot of it comes from Germany, of course, but you can go out and buy them.

I have to say, I'm asthmatic. So, I have a very keen interest in healthcare. I've got a Foobot at home which is a little, hundred-and-fifty pounds plug-in monitor which tells me what my VOC and CO levels are in my home and tells me what the air quality is in my home. I also don't buy carpets that are glued. I buy knotted carpets. I don't use plastic products on the floor; I don't use plastic products in the building wherever I can help it because of the risks of off-gassing.

Even the foam insulation or the polyurethane foam you can buy as insulation off-gasses. And carpets particularly because of the quantity of phthalates used to soften the glue to keep the thing flexible I think particularly represent the next big scandal really.

Ben: Let's take one more of these questions here. What would you do if you were in charge of large scale housing developments? What would you do to solve the housing crisis? In one minute [chuckles]. That's Kate Grundy.

Kevin: Oh my lord. Kate, how dare you ask such an enormous question. But thank you.

What would I do? I would have to be Prime Minister to do this. I'd have to run the blinking country, that's the trouble. Because you're having to deal with a completely dysfunctional industry.

I would empower small and medium enterprises; I would mitigate against the large housebuilders; I would mandate every single local authority to allocate land. I'd use the Right to Build Act in fact. That's what I'd do, to mandate.

The trouble is, everything I'm describing has already been tried. And that's the difficulty. It's not one problem. We have a crisis in numbers; we have a crisis of quality; we have a crisis in affordability; we have a crisis in planning. We have only half of the number of planners that we need. And we don't have within central government a statement of faith. And what I would personally like to see, if I could do one thing, I would announce a national statement of faith in social housing.

We built the largest number of council homes in the UK in 1953; a hundred-and-eighty-thousand homes, and funnily enough it was under a Conservative government; Macmillan's government.

My parents bought an almost-finished home, but actually for a while they were thinking about renting from the Council. People in the Fifties chose to rent or buy. There was no stigma attached to renting. We need to move back to a world where we integrate, where tenure is blind, where you can't tell who owns and who rents, where housing is considered a basic human right, and we need to create the mechanisms to make that affordable not just to own but to rent, to share, and to occupy by whatever means. There are plenty of tenure models around the world which work.

So, what we have is a binary system in the UK which is hilariously out-of-date and a market delivery mechanism which is dysfunctional and broken. So, we've got lots to mend, lots to do, but by just saying, 'we believe in council housing' or 'we believe in providing high quality housing for all and we will do everything we can to achieve that' would be a wonderful thing.

Ben: I'm going to finish this interview where we started, more or less, and that's with a big thank you to you. It's fascinating to see that the future plans for Grand Designs are exactly where they should be focused, in my opinion, of just community and ecological building. So, keep up the good work.

Kevin: Well, thank you. Thank you, thank you. And thank you for watching and thank you for the encouragement because it doesn't always feel like one's ploughing the right furrow sometimes. But thank you.