Episode 169 - Home Design to Suit Every Season

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Hello, and welcome to this episode of My Forever Home, the podcast.

I'm Frances, and I'm your host for this podcast, My Forever Home, and we are over 200 episodes in. Today, I'm going to be talking to you about designing for different seasons. I've been looking around at different houses. There's been quite a few for sale in my street recently, and as I've gone into those open inspections, I see things that perhaps other people don't see, and I thought, "What a great time to talk about designing for the seasons on the podcast."

You know, a well-designed forever home needs to feel comfortable. It should feel really comfortable in winter, and it should be comfortable in summer as well from a cooling perspective so that you don't necessarily have to turn on artificial heating and cooling throughout the year. I am incredibly fortunate, and I realize that more and more as I go to more open for inspections, how incredibly fortunate I am to live in a very sustainable home.

We built our home 13 years ago, and the regulatory requirement was for five stars. We ended up building to 7.3 stars. When we didn't have to, we wanted to. And we reap the benefits of that on a daily basis. Having a heat recovery ventilator, uh, ventilator, having a northern aspect, having thermal mass, and various other attributes that make this home incredibly comfortable throughout the year.

We hardly ever turn on the heating or the cooling. And when we do, because the home is so incredibly well-insulated, we only have to turn it on for a very short amount of time, and then the building envelope does the rest. I am reluctant to ever wanna move from my forever home, because I know that if we move to another home, we're going to be downsizing in the attributes that we've created for this home.

Not only my, um, incredible amount of storage that I created when we built this house, when we designed it, which I'll never get replicated in any other home, but also just the livability that is just so

comfortable. I'm so reluctant to ever wanna leave that. So luckily for me, I don't need to, and, uh, we're very fortunate.

So I really wanted to impart and share some of the things that you can think about as you're designing your home, and how to make it very efficient and work for you throughout the seasons. Little bit about design, little bit about sustainability, but things that I think you should have in the back of your mind.

Because let's face it, and I say this a lot I know, building or renovating a home to stay in, a forever home, it costs a lot of money. There's a lot of effort. There's a lot of time. There's a lot of emotional, um, stuff that we need to go through to create this home. So I wanna impart on you some of the things that I think are often forgotten That makes such a big difference to how you're going to be able to live in your home, and what makes it just that little bit, uh, special, and make it very reluctant to leave, like I would be with my home.

So the first thing is we're designing for climate, and that is, you know, with regards to the floor plan, but also the attributes that we add to the home to make it designing for the climate. So we need to think about the site, where the home is, but the site, the orientation of the site. I can remember, uh, when we were looking at the site to build our house on, I was absolutely adamant I would not want to be living with a west-east orientation, i.e.

west at the front, east at the back. Uh, I'd lived in that before. I didn't want my room getting pelted by western glazing. And I live in an east-west orientation now with a northerly aspect, and it means that we get to watch the sunsets, and we can sit outside at night and enjoy, uh, the sun. So orientation is critical.

I know with friends of mine, uh, they've been looking at south-facing blocks and it's like it's gonna be dark all the time. If you wanna have any sort of, um, al fresco that's, that's got a, um, a, a roof over it, it's gonna make your home incredibly dark. So I'd certainly steer away from those things. Think about, um, so the, the orientation is important.

Think about the orient... Obviously in the northern, sorry, in the southern hemisphere, we're aiming for northern, you know, rear garden. Uh, but it doesn't have to be that, and you can design around that as well, like I did. Then there's the local climate. You know, what sort of local climate provisions do you need to, to think about?

Um, whether it's cold, whether it's hot, whether it's cyclones, whether it's bushfires, you need to think about the climate and some of the things that occur with that climate. Wind direction is really important because that's where we have our cross-ventilation going through our home, which is beautiful in summer when you can open up the windows and the house naturally cools down.

And site conditions. Uh, there might be overshadowing. You know, what sort of trees do you need to retain or do you want to retain? Um, having a really, you know, amazing, uh, established tree in a

garden really adds a lot of value, um, not only to the value of the home, but also to the amenity of your garden.

So think about site conditions as well. So passive design, which is where we're designing around the orientation of the sun, is a critical thing that costs nothing, and it means that you are designing your home to maximize the northern sun and managing it to, so maximizing the, the winter northern sun to warm your home.

And then in summer, you need to conversely then manage not having that northern sun come inside. So that takes really good design, and that's when you do need a designer, uh, an architect, a building designer that really understands passive solar design. Now, recently I had someone call me, and they said that they were really struggling with their architect to get the home to be passive solar designed, i.e.

maximizing that northern light. Uh, that was a bit of a red flag for me because I thought if she's trying to educate her architect about designing around passive solar, uh, principles, then, uh, they probably don't even understand it enough to be able to design around it if they're really reticent to wanna do that.

So I would definitely be asking questions of your building designer or architect around passive solar design, what they think of it, do the they design for it, because it costs absolutely nothing to design a passive solar home. And that's working. The design is working around the sun, maximizing it when you need to, i.e.

in winter, and minimizing in, in summer when you really don't want the sun coming inside. So you work out your design first, and even, uh, uh, just conversely, I'll just go back to this passive, uh, solar design. You don't need to necessarily use passive solar design when you're doing a Passive House design.

However, it's never going to do any harm because, as I said, it costs you nothing and, um, you're still able to get the benefits of a passive solar design even with a Passive House. So design, get your design right. Make sure you've got the right designer that really understands those principles, and then make sure that your home is responding to the four seasons.

And one of those things is, as I've just mentioned, that you're maximizing that northern sun coming in, uh, during, uh, winter. Comes and heats the home up naturally. How beautiful. And also having the sun inside is such a great, uh, attribute for mental health anyway, particularly in winter. And then in summer, you wanna make sure that you're minimizing how much sun is coming inside.

Ideally, you don't want any sun to be able to be shining inside the home. That's good design. And then we need to think about our shade protection to make sure that that's not happening. So let's talk about summer. I'm gonna cover off here the, the, you know, summer and winter. Um, we want to be able to keep our home naturally cool in summer.

One of them I've already talked about, managing northern li- northern sun, but also that western sun. The western sun is severe in Australia. And I know I had many a, a debate with my husband around if we were going to have any west-facing windows. He wanted none. I managed to get a very small western-facing window upstairs because I wanted to be able to look down over the pool to watch the kids if I was upstairs.

I didn't want to be in a position that I couldn't actually be upstairs and not look over the garden outside, out the back garden, so we put a very small window in facing west. They are the hottest windows in the house in winter, uh, sorry, in summer, and they are the ones that you really wanna either eliminate, minimize in terms of size, or have a way that you can create some sort of shade protection.

So cross ventilation is another one. So as I mentioned earlier, cross ventilation is when you're able to capture breezes. You're able to open up the home, open up the windows, and then you get that magnificent flow of cool air coming through your home. And it, and it cools down your house very, very quickly when a cool change comes in.

You know, it generally comes from the south, and that is going to really cool your h- your home down. Now, if you think about homes built in Queensland, they're elevated, um, and then they have, um, windows that can open. Well, we all have windows that can open, but they are designed in such a way that you're getting a really non-obstructive cool breeze run through the house from front to back and from side to side, and that's the way you cool the house down.

Because it's elevated, it means that that breeze can more fle- freely f- f- oh, can't even talk. More freely flow through the home. I got there in the end. Um, window placement. So it's the window placement, I've already talked about that, but it's also the window type. So when you've got an awning window, which is the one where you've got a little bit of a winder and it opens out maybe 10 or 15 centimeters, they don't really catch a breeze very well.

So if you're wanting to have some good cross fo- ventilation, I would minimize or eliminate awning windows in your home altogether because, you know, the, the, the wind's gotta come up from under, and you're not gonna get that really amazing breeze. So louvres are great. You notice that they are used a lot in Queensland.

We can get, now get sealed, um, louvres, but they allow for a really beautiful breeze. Casement windows are one of my favorites because they sort of open out- Like a door, and they really capture the breeze. So, um, they are a great window. Obviously ones that, um, you know, hinge windows, all of those are great.

I would just try and avoid the awning because you can't really get the wind, uh, to cool, the breeze to come and cool down as easily. External shading is probably one of the things that I talk to clients about more often than not. It is the thing that I think has got the biggest misnomer about it. There is a belief that if you have blockout blinds inside, you're going to be able to block the sun, keep your c- um, home cool, and that is completely not factual.

What you need to do if you wanna keep your home cool in summer, is you need to make sure that the sun doesn't hit the glazing, it doesn't hit the windows. As soon as the sun hits the, the window, it means that that heat is gonna be transferred. Now, depending on the sort of frames that you have, if they're thermally broken or they're thermally improved, or if they're timber, which is the best, that heat transfer is not going to occur.

If you've got thermally broken, it's not going to occur, but if you've got thermally improved, you will have some sort of heat that gets transferred through the frame, let alone the glazing. So you need to be able to manage the sun from the outside of the home, not the inside. So that's with the use of eaves, it's with the use of pergolas, it's with the, the, the use of louvers, and it's with the use of trees, and this is where our landscaping has such a big impact Just a, a c- a, a, a quick side tangent there on landscaping.

At the back of our, uh, our back garden is, is almost like... Well, someone came here and they said it reminds them of the Blue Mountains. So even though we're on a very standard suburban home, you know, 15 kilometers from the city, uh, we have purposely used a lot of big trees, and we've also got a lot of greenery and, and, uh, climbers over our fences.

So effectively, you walk outside and it's just all green. So what that means is the temperature in my back garden is significantly lower than my front garden in summer. In my front garden, I've got a little bit of paving out the front, and I've also got a driveway. So that is, makes things so much hotter out the front than out the back, and it is quite remarkable what the temperature difference is.

If you really wanna retain a lower temperature due th- in the summer, just go and plant some trees because they are gonna make such a big difference. In fact, really invest in your garden, which I'll get to a bit later anyway. Window coverings, make sure that they are, you've got your external blinds sorted out.

But in terms of inside, you can... So thermal, um, so if you've got thick curtains that are lined, yes, they are brilliant in winter, brilliant in winter at keeping the, the, the heat in, but they're also good for keeping the heat out in summer. So you may have your external treatment. If that may not be possible or for whatever reason, um, thick curtains are definitely going to make a difference.

They're still gonna hit the glazing, but because a curtain encapsulates around the entire window, it means that it's going to keep that heat in that space between the window and the curtain a lot more than a blind's going to do because the air escapes out the sides and up the top. So a pelmet really serves you well here as well.

Honeycomb blinds are great as well. They are becoming more popular. Again, they're good for minimizing heat and also, uh, retaining heat in winter. Thermal mass, I don't wanna get too technical here, um, uh, with, with all of the suggestions that I'm making, but if you are doing passive solar design, which I highly recommend, costs you nothing, uh, free, free, free.

Thermal mass is another thing that you can do that then creates, um, heat inside the home as long as the sun's not hitting it. So in my own home, just as an example, sometimes people have, um, brick walls that the sun hits, uh, because it's been, been designed in that way. Might be a partition wall, it might be a wall where there's a fireplace or whatever it is.

If the sun's hitting that in winter, that's going to then push out heat inside the, the rooms. Um, for us, we've used a thermal mass in our slab, and then we have tiles on top of that. So if we had timber, the thermal slab would not create thermal mass for us because the timber would actually act as an insulator.

Which sounds great, but actually we need to let thermal mass do its job, because thermal mass when the sun hits it is going to heat the space. But in summer, it's going to keep the room a similar temperature to the slab, which is anywhere between maybe 16 and 18 degrees. Well, that's just bliss. That's not to say that your home is going to be 16 degrees inside, because there's other factors that are going to heat it up.

But in summer, if you've got a really nice cool floor, well, that is bliss to walk on. So think about thermal mass. Again, that's a conversation to have with your architect. Goes hand in hand with your passive solar design. Uh, good ventilation, um, like we were talking about before, your cross ventilation is also then going to reduce your reliance on air conditioning.

And then again, having a HRV means that you're able to bring fresh air in. So that was sort of my top ones for summer. In terms of winter, obviously we don't wanna keep the heat out, we actually wanna keep the heat in. How do we make our homes warm, cozy, and, um, lovely to be in without necessarily turning the heater on?

Well, there are ways. Passive solar design, as I was talking about, we need to maximize that northern sun coming in. Western sun coming in during winter is also an absolute blessing. Just means that the sun is heating your home rather than, um, a heater, rather than artificial heating. So that not only saves you money, but it's the feeling in the home, for me, not having that ghastly air being pushed out.

I don't like air conditioners. I don't like the air that they push out, so having, um, your home heated naturally by the sun is just such a beautiful feeling. It's temperate. It just means it feels a comfortable temperature as m- for as long as you possibly can throughout the year. So this means also then we wanna absolutely max out on insulation.

This is one of the key ways that you can retain heat in, uh, winter, is to have insulation. Um, so in the roof, max out in your bats. Do not scrimp on your roof. That is probably the best way to retain and keep heat out as well, but we're talking about heat retention now. Also, in your walls, and you can also have it in your floors.

So for example, in an established home, uh, maybe with floorboards that's up on, um, that's not on a slab, you can actually pump in, um, insulation underneath, uh, when you've got a, a house that's on

stumps. So there's definitely ways to get insulation throughout. Glazing your windows. Really, there's, there's just nothing, um, there's nothing better than having double glazing, but it needs to be the whole home.

You can actually section off parts of the home and, and maybe just have the new part of the home with double glazing, but really the benefit is going to come when the entire house is double glazed. And look, in some cooler climates in Australia, triple glazing is also very, very beneficial. It's also n- much more, uh, costly, um, so do get the sums done to see how much benefit you're going to get from triple glazing versus, uh, double glazing.

And a- as I was mentioning earlier, your window frames is also really important, whether they're timber, thermally improved, or thermally broken, that's going to make a difference in terms of the heat transfer from inside and outside. And in winter, we don't want that cold air coming through the, the frame.

Don't... You've probably been in homes where you actually touch the aluminum frame, and that's neither thermally broken nor thermally improved. It's just an aluminum frame, and you can feel how incredibly cold it is. Well, that's actually transferring that cold inside your home. That means you need to put the heater on more than what you would if it was thermally improved or broken.

Um, window treatments again, they are something to, you know, they're very beautiful to look at, but they really serve a purpose. I always like to install curtains wherever I can. Not only are they aesthetically beautiful, they can't be installed on every window necessarily. You need a stack back, and I won't talk about window treatments right now in terms of the cans and the, and the, what you can and can't do.

But if you can install wind, uh, curtains on as many windows as you can, that is the best insulation that you can provide. They also serve as a superior block out to blinds. Um, but they do provide, you know, they, they just envelope the window, meaning that you're keeping all that beautiful warm air inside and stopping that cold air transferring inside as well.

Think about get an expert in as well around your heating. So there's no point putting in over-engineered heating if you've got an amazing design. Um, we did get backup heating and cooling. And as I mentioned earlier, I use it, um, uh, you know, rarely. It's spasmodically used. We only need it for a short amount of time because the insulation is so superior in our home.

But, you know, you might... I, I, I'll actually use my own example. When we designed this home, because I'd lived in Europe for such a long time, I was absolutely, um, crazy about having, um- Oh my goodness me, I can't even think of the word. Um, the heating that comes from Europe that's, that's through hot water.

Heat pumps are definitely something that you need to, um, investigate. Um, but actually when we looked into our heating, we realized that we could use a commercial heating, uh, system that was

heating and cooling in one. And it's silent, um, and it's got more compressors which makes it more, uh, energy efficient.

So that was going to suit us much better than, um, hydronic heating, which is what I absolutely loved in, in Europe. And I was adamant that I was going to have hydronic heating. And then when we looked at the cost and we realized that the cost was going to be similar than having, um, ducted split systems, it was absolutely a no-brainer.

Plus, the thing with hydronic heating is it takes up a lot of space in the room. There's a wall space. Um, they love putting them under windows in the UK and in Europe. But then if you're gonna have, uh, curtains, the curtains are sort of in front of the heater, so it sort of defeats the purpose. So I have had a lot of clients really wanting to use hydronic because it is incredibly efficient, and it's a beautiful dry heat.

But there's definitely different things that you can look at these days. So there's my summer and my winter. Um, they're by no means exhaustive. They are just things that I'd really like you to think about. They're things that I talk to my clients a lot about. There's, they're things that come up a lot in conversation.

But if you think about seasonal living and just how it supports your wellbeing, other things that I think are really important, fresh air and ventilation. If you've got fresh air coming into your home, it's going to be a nuch- much nicer place to be in. Uh, it's like when we go outside, we feel better. Um, having the sun come in, we feel better.

So it really supports our mental health. Indoor air quality is really important, and yes, you go and pu- put a purification system in and all those sorts of s- things. But having a heat recovery ventilator, which, which naturally brings in fresh air into the home without having to open windows, is an amazing, uh, way to do that and create energy efficiency when you've got an air-sealed home.

I'm not going to talk about HRVs in this episode, because that could be a whole episode. There is, um, an episode on HRVs much earlier on in the podcast, uh, in the podcast episodes. Uh, indoor/outdoor connection in the warmer months. In Australia, who doesn't wanna have that incredible connection with outside when we, uh, when we live in Australia?

Because that connection not only makes our home feel larger, it brings the outdoor in. We feel better. The plants, our garden feel more connected to us. That is a really good thing to think about, which then leads me to, um, the landscaping. So landscaping affects how you feel in your home, the outlook that you have when you look outside your window, what do you see?

If it's a lot of greenery, good for your mental health. Keeps, keeps the perimeter, keeps the outside of your home cool. Um, it makes it feel better. Gardens sell homes. You know, getting measly on the garden, um, you know, it really affects the overall aesthetic of the home. A good garden can make a house. Bad garden can make a really beautiful house look rotten.

So, you know, a garden can make such a big difference, not only to the overall home design, but to the, the way you feel about the space, the connection with the outdoors when you've, when you've got the warmer months. So don't underestimate the value of the garden. Uh, but it absolutely keeps space around your home cool.

Um, the birds that come in, the flowers that you have. I pick flowers from my garden all the time. I love listening to the birds in the morning because we've got, um, you know, trees in our garden that are conducive for birds coming. It's just such a beautiful environment. Um, so really think about that as part of your overall site.

I always said that our entire block of land was part of our home. So it's the overall site that was important, not just the house, the bricks and mortar themselves Natural light coming out c- coming into the home during the year. I just talked about how fresh air makes, uh, a b- a difference to our mental health.

But having natural light come, coming in as well, particularly in those winter months, is an absolute game changer. You can, y- you can understand why in the UK and in, in Europe they have conservatories. You know, this, this area at the back of the home that is completely glass, so they can sit there and warm themselves, and just feel the light and the sun on them makes a difference.

It's all for better comfort, healthier living, mental health, the whole thing. Small design decisions can make a big difference. Window treatments I've touched on. They're not just decorative, they actually are performance enhancers for your home. Get an expert to help you on that, someone that really understands, um, how they are insulating, and the difference that they make in warmer and summer months.

Lighting and how it changes the way we feel in our home throughout the season. So it also means then in the darker months we need to have really good, really well-planned artificial lighting, really good task lighting, and then also that ambient light to make us feel, you know, cozy and, and warm. And there's nothing like having lamps on, particularly in winter.

So think about that. Landscaping I've touched on. It's the overall comfort of a home. The outside comes in. Even in winter and you're not opening all the doors to bring the outside in, you can still see outside. I love being able to just look out windows and seeing the canopies of trees, or seeing the sky, or seeing elements of my garden that just bring me joy.

Energy efficiency starts with the design. It doesn't start with solar panels. It doesn't start with, um, you know, having, um, you know, solar boosted, um, hot water. Those things are not good design. Good design, energy efficiency is right at the start. It's not at the end. So designing for every season is what designing for a, for a forever home is all about.

Because when you're comfortable, and it's economical, and it just feels right for every day of the year, you're never gonna wanna leave. And, um, I think because there's been so many houses up for sale in my street recently, it's like, "Oh, everyone's going. Do we go too?" But I just think, oh my

goodness me, we're never going to be able to replicate this house, find another house that's like this, unless we went to build it again.

I'm not quite ready to build again. Um, so- Really think about those things. They make such a big difference. It's very difficult to pinpoint the effect of, uh, a well-designed sustainable home until you've actually lived in one. And I think I've mentioned before in another episode that go and stay in an Airbnb that is, uh, particularly in winter, and see how it feels, a well-designed sustainable home, and, and just feel the comfort of that space.

I know when people come to our home, they're like, "Oh, you don't have the heater on." You know, we don't have the heater on because it's so well insulated. So hopefully that's given you some things to think about when you're embarking on, um, briefing someone, your architect, finding the right architect, when you're going through your plans.

Um, and push. Like that p- uh, lady that rang me a couple of weeks ago when she was pushing her architect, maybe that was a sign to choose another architect. I think in the end, she managed to get what she wanted, but it was a, an uphill battle. If you've got someone on your side that understands passive solar design and understands all the elements to make a home perform really well and understands how to make a house perform in summer and winter without turning on a heater or an air conditioner, you're already winning.

Just remember, those, those things cost nothing. Uh, hope that's g- given good food for thought. Uh, that's it for me this month. Of course, I'm back here next month. If you'd like to book, um, design hour bundle where you can have access to my, um, professional design expertise on whatever you're working on, you can either book a five or a 10-hour bundle.

The link will be- the link will be in the show notes. It's a lovely way to work together without being locked in, uh, to anything beyond just hourly, um, hours together. That's it from me. Bye for now.

END OF TRANSCRIPT

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