

EP5 transcript

[00:00:00] **VIC:** Today we are joined by Rohan Bush, who is the director of building sustainability, innovation and standards at Kāinga Ora. Rohan has 20 years of experience in urban development, housing policy and sustainability strategy. She's responsible for the standards, which Kāinga Ora order's public housing is built to, and the adoption of more sustainable and innovative building solutions.

[00:00:23] Rohan has extensive international experience and has worked at all tiers of government across Aotearoa Australia and more recently the United Kingdom. She joined the construction and innovation team at Kainga Ora order in late 2019, having returned from a role as Head of Partnerships in Future Skills for Construction Scotland Innovation Center.

[00:00:44] Prior to leaving our shores, Rohan held the post of manager of affordable Housing Policy for Auckland Council and worked alongside the founding chief executive to establish and grow the New Zealand Green Building Council as an influential industry organization in the [00:01:00] property sector. Welcome Rohan.

[00:01:02] **ROHAN:** Thanks very much. It's lovely to be here.

[00:01:05] **VIC:** So we're going to start with a question that we're asking all of our guests on Ride at home. When have you felt most at home and why do you think that was?

[00:01:14] **ROHAN:** First of all, thank you for such a lovely question. It made me think of, a lot of happy times in my life.

[00:01:19] I think the time I feel most at home is, When our family and our extended FAO actually go out every summer to stay in the forest and birdhouse at Piha, I grew up in Titu, out in the western edges of Auckland, as a young child and so always felt very happy deepen the bush under Nico palms on a hot summer's day and safely in the surf of the West Coast beaches.

[00:01:46] **ROHAN:** So it's lovely to be able to return, out there regularly as an adult, with the family and, yeah, have that really strong sense of connection back to my childhood.

[00:01:55] **VIC:** Now, there's so much in that story that says everything about what [00:02:00] home is, the sense of connection to what it was like growing up, the sense of connection to a place that makes you feel, safe, a sense of connection to the outdoors.

[00:02:10] and I wonder, Rohan. If that is a little bit about why you might be working at Kāinga Ora order as the director of building sustainability, just listening to your connection to nature there, it sounds like that could be a good place to start.

[00:02:27] **ROHAN:** I, I think you're probably right. I think, growing up in the seventies, like I did out in the, and it was the far side of town for those people who know so out towards who are, No footpaths, which was made it pretty hard for my mother who had, the sort of three children under five going on and the only family car was in town with the father of the house.

[00:02:46] and so I think, it was a particularly, Sort of wild childhood for it for an urban dweller, cuz we still thought of ourselves as living in the big city. But we certainly were roaming around in the bush on a daily basis. And I think you're right. I think [00:03:00] that did give me a strong sense of connection with the joy that, our natural environment can bring to us and.

[00:03:05] and a desire. I think that the way that we can live in cities and in urban environments in a way that's a lot closer to nature than, over the last 50 years, the way we've been building cities, much more around enabling cars than enabling people to live.

[00:03:22] **VIC:** And moan, just reflecting on that, people are very aware right now that we have an acute housing crisis, but I think what people are less aware of is that it's probably taken us 40 or 50 years to get here, . but we don't have 40 or 50 years time to redress. all of the things that we know that we need to redress and.

[00:03:45] A lot of what we need to do urgently does come down to our built environment and the way we construct it, which is where that innovation part of your expertise comes in. And I just wonder if you could tell [00:04:00] me what it was like, working at the Scotland, Construction Innovation Center and how that might have influenced some of the thinking that you've.

[00:04:09] Back to alt or,

[00:04:11] For me, it was a big learning about working in a. Innovation focused environment, because that wasn't something that I had experienced so far in my career. I found a lot of similarities between the kinds of challenges that the, both from a housing point of view, but also on the construction side.

[00:04:31] **ROHAN:** Lot of similarities in the challenges between Scotland, and New Zealand. But for me, the new thing was about the opportunity. Innovation based approach could bring to solving some of those challenges. you know, what often people think of to do with innovation in this area around specific products or materials.

[00:04:53] And that was fascinating and lots of opportunities in that area, particularly in the, low [00:05:00] waste, low carbon area, were really fascinating. The organization I worked for was interested in everything from that scale right through to, innovation and much more of a kind of the housing system type of space.

[00:05:14] So working with multiple players across. Private, public and private sector, the university sector around trying to come up with some models that might solve some of those more systemic challenges. one of the things that I learned, cause I probably started there with a view that innovation was a bit more like a, something that might happen to you in a flash, like a eureka moment.

[00:05:36] a bit like a creative genius. Type of, thinking about it. And what I realized is that innovation is really about applying a system or approach or a model, where you have a, a high degree of. Intentionality about what you're doing, so you understand what your challenges are, you understand where you're looking for the change or the benefit.

[00:05:59] **ROHAN:** And then you [00:06:00] bring an approach to test the range of options. You understand your risk appetite. you work through a kind of a process to, to explore it and come up with a solution that's gonna work. So I think that's the thing that really. I learned in Scotland and the thing that I've been able to, bring back into the role that I have now because I've had the good fortune to be given the opportunity to establish an innovation focused team at cuing order.

[00:06:28] and we've now got a team of about eight fantastic people all focused around innovation when it comes to building products and materials, building systems. onsite construction type practices, and beyond. and that's an opportunity that I think's fantastic. And it's an opportunity not just for cuing order and the public housing that we build, the opportunity is for us to share.

[00:06:52] **ROHAN:** Because we have that, that the benefit of being an organization that can have a team of eight people working around innovation, we don't [00:07:00] take that lightly. and we really wanna share what we are learning from that, both the successes and the failures, with other organizations, particularly, community housing organizations, but wider as well.

[00:07:09] **VIC:** You've raised a great point there, and I'd really like to hone in on the systems role aspect for Kāinga Ora, because I think Kāinga Ora, like the community housing sector probably in the public mind is mostly equated with the construction of public housing, but I'm not sure that many understand the. Really powerful systems role that Kāinga Ora does and can play in our overall housing system, and certainly in terms of its impact on the wider construction sector and the flow and effect that has, as you just alluded to organizations like our members in the community housing sector.

[00:07:50] I wonder if you could. Give an overview for us of what you see that system's role being and how kind order might be [00:08:00] able to intentionally intervene in the system to bring about an innovation mindset to the wider sector, that's a great question.

[00:08:10] **ROHAN:** Thanks, Vic. not an easy one to answer, but I'll give it a go. A and i, I think one thing that I would say is, that there's different systems we can be talking about and I think it that there is a housing system in New Zealand, there is a construction system in New Zealand, and those two things have an overlapping relationship, but certainly, Part of Kāinga Ora, establishment legislation talks about our role in system transformation, and I think that's the language that it uses.

[00:08:40] the part of Kāinga Orar that I work in is more focused on construction. System, and other parts of Kāinga Ora more focused on the housing system. So I just wanna make that note.

I'll talk a little bit more about the construction one because that's, that's a bit more the area I've been working in.

[00:08:56] **ROHAN:** And so one of the things that we did, and it was now two years ago, [00:09:00] was publish our. Construction plan called Building Momentum. And in that we, the main thing we did in that really is recognize that we have these two roles in this area. One, we have to build. A lot of public housing quickly, efficiently, to high degrees of quality.

[00:09:20] That's what we've been asked to do. But the other one is the other thing we've been asked to do, which is support the wider, construction and housing delivery system to, do things better. Now it's, do things better. Sounds quite neutral, but we were quite specific in terms of what we thought needed to be done.

[00:09:40] By us and by others as well. we've got five focus areas and they are, partnerships, innovation, sustainability. Design and delivery and the delivery really speaks to, how the whole system works in terms of efficiency and productivity in the system. [00:10:00] so that really was us challenging ourselves to say, okay, if we are saying, uh, we want to be.

[00:10:05] A leader or we want to demonstrate what better looks like. We need to make sure that we are doing that ourselves and that we are communicating and supporting and collaborating with others on that. And so in, in the area of innovation, one of the, I guess the tactics or strategies that we've used is to look at how we can support research and development, prototyping, piloting, of more effective build solutions.

[00:10:35] So that might be anything from, radically reduce. The construction time on site. it might be a cost reduction focus, it might be a carbon reduction focus. So whatever it is, we've been looking to see how can we invest. Earlier on, a kind of upstream from our build program. So work with companies who have products that are either close to market or that are in market, but need some further r and [00:11:00] d or support to get more mainstream.

[00:11:02] Say how can we help, support that so that we can. that product or that system or that approach and get the benefits from it, but take a bit of a de-risking role in that through a closer partnership with that organizational company. So that's work that we are just starting now, and we've worked with a few companies just on a trial basis to see how that goes.

[00:11:26] and we're doing that in partnership with Callahan Innovation. Because they work with lots of businesses in this space. And what we can bring is, we are a big client for a start. So we can say, Yep, we can trial this unreal life projects and there is a potential pipeline there of work.

[00:11:45] **ROHAN:** If we can demonstrate collectively that it's bring some good benefits to us or.

[00:11:50] **VIC:** Fantastic. and I just wanted to pick up there your point around. Ways of working on site, because I think when lots of people hear [00:12:00] construction innovation, they probably go to materials, the types of things we're building buildings with.

[00:12:06] But you talked about there a program of work going on to change the way of working on site as an innovation model for, creating some pace towards getting the structures up and ready to go. And I believe it's called Project Velocity. And I just wondered if you could tell us a little bit more about that and the potential learnings that are coming out of it that could be applied in our sector and beyond.

[00:12:28] Yeah, so Project Velocity's first focus is before we get to site, What we were finding was that some of our projects were taking an almost unbelievably long amount of time to get from, hey, I think this is a, a piece of land that we should, do some development on, to, welcoming our customers into their new homes.

[00:12:51] **ROHAN:** And so what we did with, what we are doing, cause it's very much a live project with Project Velocity is creating. Housing delivery system [00:13:00] internally for cuing order and with our design and build partners, where we have a really high degree of predictability and speed about that process. So in the trials that we've done, To date, the time that we've, that used to take from us initiating a project to welcoming customers in, or particularly to when we start on site.

[00:13:23] Cuz that's the first focus, is being shortened by, more than a hundred percent. , it's really important to us because that has a direct impact on, people on the waiting list because the quicker that we can deliver more housing, the sooner people can move off the, register and into a home.

[00:13:39] even though it's abstract and it's like it's about our own internal systems and processes. It has a really material impact I think the benefit or the thing that might be an opportunity for community housing providers is the.

[00:13:55] **ROHAN:** Principles or the approach that we took. So what we found was that we've gone from [00:14:00] building, a hundred, 150 homes a year up to building in the thousands of homes a year. Now, I know that's not a scale that, the community housing providers are currently working at, but all the same. What we realized was that we've outgrown our.

[00:14:14] So we start, we just were doing things and we kept doing more, and we kept doing more. And then we got, I think we lost sight of it as a system, as an approach that we could consistently use. So the team, first of all did, a really deep. Piece of analysis in terms of, well, how are we doing things now?

[00:14:34] So they went back through a number of delivery of, housing development projects, and they went through and they looked at every step and they went, Okay. So once the, once the geotech was done on the site, then what happened? And it was like, Oh, it sat on someone's desk for a few weeks.

[00:14:49] Oh, and then they realized something wasn't right, so they sent it back to, they literally went through email, by email, or report by report, and then they redesigned the system. and they said, [00:15:00] Okay, if we wanted a system with high repeatability, high degree of

confidence that it's gonna take us 40 days, and then we need that figure on site, then how would you design that system?

[00:15:11] And that's what they did. And for us, that's a system of fully integrated, co-located design design teams. So that's kind order stuff, That's our consultants, that's our build partners all in the same room. Together, doing, a set of work that have been mapped out to a very fine way of detail.

[00:15:32] So it's, exactly, this comes first, then this happens. That should take half a day, then this happens. That should take another half a day. And the results are, have been quite astounding. So we are looking at moving from a smaller scale to a medium scale with that now, in terms of testing that, that process.

[00:15:49] it's a real opportunity for us to deliver more homes. That's what it's really about. it, it took an investment I think, and really going back and looking at the way we were doing things and being, re being [00:16:00] willing to redesign the way we were doing. And then one of the new, the next phases will be to look at the onsite site to see if there are similar opportunities there.

[00:16:09] **VIC:** And do you think that's something that is best achieved when you've got the scale of kinder order or do you think there are some of the principles or even the tools that you've used there in terms of integration that could apply for smaller scale projects? And I'm thinking here, even smaller scale residential builds for the private market A as well as the community housing.

[00:16:29] I, I think the integrated team,model and the,the really high degree of clarity of understanding that the flow of what needs to happen when and who's responsible, and having a really good oversight of that is probably just as relevant. I think the opportunity that we have is cuz we're a large client, we can go to our design and build partners and go, Hey, we want your team in the room for the next five weeks or whatever, And which are, is harder to achieve I think on a, Single standalone project.

[00:16:58] that's the other thing they do. They put a [00:17:00] management lens over it on a day by day basis, and they look at slippage on a day day by day by day basis. So the team gathers every single morning at eight 30 and they look.

[00:17:12] **ROHAN:** any slippage from the day before. So it's quite a different mindset from what where we used to delivering kind of projects, and I think that's probably true across the sector.

[00:17:23] **VIC:** Now that data and evidence, note you've just mentioned there, reminds me of the, the good old saying, what gets measured, gets managed.

[00:17:30] and that's certainly been true for a long time in the circles that you've moved in, in and around the New Zealand Green Building Council and anyone who's been paying attention to climate change and the need to have, very stringent. regulated measurement of our approach to emissions. And one of the things I know I said that, innovation isn't just about building

materials, but I do want to talk about building materials because, embodied carbon, is on the lips of a lot of people in the [00:18:00] construction at the moment.

[00:18:01] and we're also thinking a lot more about, As you've just pointed out, the speed to build to enable more affordable, decent homes more quickly, and construction materials have a significant role to play in both of those things. and we've got options, don't we? We've got local options and we've got overseas options, and there are pros and cons.

[00:18:19] **VIC:** And I just wondered if you wanted to give us a little bit of your thoughts on what you. Your role is, or indeed, the construction sector's role is in developing New Zealand supply chains and or balancing that with overseas options that we might need in the meantime.

[00:18:36] yeah.

[00:18:36] **ROHAN:** There's a lot in that question as well, but I

[00:18:38] **VIC:** know that's just it, that's just a warm up ,

[00:18:40] Yeah. So I'll, maybe I'll start and make a few comments in terms of the, the kind of low carbon or the understanding, the carbon impact of what we are collectively doing in the building and construction space.

[00:18:52] and I think everyone who's, who's working in the sector at the moment is probably aware that we're in a period. Of big change in [00:19:00] this area, with the changes to the building code, certainly the Green Building Council's Homestar Standard has been re-released to to a new version, which really reflects the direction that we all need to move in.

[00:19:11] And then there's the government's wider, building for Climate change program, which gives a very clear signal in terms of the direction that we're heading. And as you say, embodied carbon is one of those directions. one of the really important things that we are doing at Kind Order to get ourselves ready for that is to develop a, carbon measure.

[00:19:29] **ROHAN:** Tool, that will enable, our design teams to have, a. simple to use tool that shows them the carbon impact of the choices they're making, both at the very early stages of design, which we all know is really important.

[00:19:44] But also later in the stages when they might be making some of those. fit out choices or finishes choices where they're trying to understand if there's a real carbon difference between some of those options. and there's lots of organizations that you know, that help in [00:20:00] that space. The Green Building Council has got, standards and tools in that space.

[00:20:04] brands has done a lot of work in that space, as well as environmental Choice. New Zealand, who runs New Zealand's Eco labeling system. So there's a lot of good work that we can build on in that space. and you're right, it does come down to. The evidence and the data. There are some things we can intu it, but there's a lot that we can potentially get wrong in that space unless we rely on the evidence.

[00:20:27] **ROHAN:** And of course, we all need to be using the same, carbon information. We need to, make sure there's a consistency there, in terms of methodologies that we're using. And I think that's the direction that we're heading in. And it's just something that we. Are gonna have to get used to. It's a new part of the way we design and operate and own buildings, when it comes to local supply chains, and international options.

[00:20:53] One of the areas that we've been paying quite a bit of attention in relation to that question is in relation to offsite [00:21:00] manufactured, elements of buildings or indeed whole buildings or whole homes. And so this has been a big focus for us over the last few years. and I'm really pleased to say we're now in a position where we have a very good understanding of the New Zealand, offsite manufacturing.

[00:21:17] supply market,from the small, startup space through to the, and I wouldn't say through to the large, cuz there's not that many large suppliers of offsite manufactured product in New Zealand. I'm sure there will be in time. but right now there are,a reasonably large number of manufacturers who can deliver.

[00:21:36] **ROHAN:** A small to medium amount of homes a year, and that's growing quite rapidly. and we are working with a number of them already and we're really keen to, to help support others as well. At the same time, we've been working with some international suppliers, and look for us, that was really driven by,the demand and the speed of trying to get new homes available.

[00:21:59] if there wasn't [00:22:00] the demand or the speed,pressures, we could, much more happily just work with the New Zealand suppliers and wait until they're outta capacity,that, meets our needs. But that takes time and businesses need to grow at a rate that's sustainable. We're very conscious of wanting to contract at the right scale, not to go from zero to a hundred with no ability for either side, the house as a client or the supplier to make sure that we can work together well.

[00:22:29] that the product meets our needs. That particularly that they've got their supply chain sorted, because of course, with an offsite product, that's different from onsite build, isn't it? You need to think about transport and installation and how you integrate with the siteworks and foundations and all of that side of things.

[00:22:47] And, you know, we are learning a lot, as we go on that front and we are sharing that learning with a number of other,government agencies that are involved in, in construction in various ways.

[00:22:58] and with the community housing [00:23:00] providers as.

[00:23:00] **VIC:** Your point there on business sustainability, of our manufacturers really struck me because it's not just about kind of order growing those businesses, is it? We've got, finances, we've got a planning regime, we've got architectural practices that all exist and come together to enable and approach construction. So I just wonder if you could talk a little bit about

what you think might need to happen in terms of the finance systems response to these types of innovations and the planning and architectural.

[00:23:38] Regime's response to these types of innovations? I know there's some great stuff bubbling up, but do you see anything that, that could really change the game if it evolved?

[00:23:48] **ROHAN:** one of the things I was really pleased to see was in the, the second version or of the construction sector accord. they've really put a much bigger emphasis on innovation.

[00:23:59] And I think [00:24:00] in a way that's a, that's a good home for it, the construction sector record, because as you say, it needs, it needs a whole system support response. So it needs everything from the design side, the build side, the financing side, the regulatory side. It needs that collective response, I think.

[00:24:20] The approach that we are taking is to see what our contribution can be around innovation. Given that. We finance our own bills, we, have a high degree of control over the design. We, have a high degree of control over the construction on our own sites.

[00:24:38] we're a long term asset owner, so we have both the opportunity to, Manage that risk, that innovation can bring or that unknown aspect that comes with innovation. we have the ability to, to invest in it, and then we have the ability to manage any potential risk that might come with it. and we can look at it from a whole of life.

[00:24:59] **ROHAN:** [00:25:00] Perspective because we know these homes, we're gonna own them for the next 50, 60, 70 years. And we, we know we need homes that will support customers, living really good lives over that whole period of time. And we think that there are opportunities to do. Differently, but we are very conscious that, whenever we incorporate something new or innovative into a home, that innovation will stay in that home presumably for the rest of the life of that asset.

[00:25:30] So that's why we are doing some of that, that work upstream. So it may be that we decide, let's prototype this before we build it into a home because that, that is gonna be someone's final home or let's, let's invest in it being built into a different setting, not a home setting, and we can test it in that.

[00:25:47] that environment first. I can't speak on behalf of the finance sector or the architectural sector. but I can say that from our role of working we are trying to, Empower the [00:26:00] architects that we work with, the planners that we work with, and on the sites where, which we own, and the developments which we are the client for.

[00:26:08] **ROHAN:** We're trying to, test ourselves to, to take on a bit more risk at an appropriate level, but do that in a really intentional way so that we're saying, Yep, this is important to us. We think there's really good benefits here. And we'll test it first of all by, one of the products we're looking at, we won't test it on the interior of a home, but we'll test it on one of our entrance ways and see how that is in the first building.

[00:26:31] And then we'll look at that and monitor that. And then on future we might incorporate that on the inside of a home if we get a good result from that, just as an example. So we have quite a planned way of approaching that, understanding what the risks are. and and really we are supporting innovation because we think there are benefits there.

[00:26:48] The carbon challenge I is massive and is gonna test us hugely in terms of, being able to build affordable, high quality homes, that are low carbon, is gonna need innovation. [00:27:00] both on the design front and but also on from a manufacturer point of view, in terms of those, lower embodied, carbon products and materials.

[00:27:08] you said something else that really interested me there around monitoring, and I'm just wondering if you could let us know what kinds of things you monitor for. Are we talking here about the performance of the building, the ways people interact with the design, the CO2 emissions inside?

[00:27:24] **VIC:** As we know there's been lots of monitoring of air quality going on in the last few years. It'd be really great to hear a bit more about, about what Kaga order's monitoring and what you're looking out for as part of that. .

[00:27:35] **ROHAN:** Yeah. , all of those things really. when we develop what we call a pilot project where we are intentionally trialing something new that we want to learn from, we will establish a, a monitoring and evaluation plan for that project or for that development.

[00:27:50] So it really depends what it is that we are trying to evaluate. So recently, over the last few years, we've done a number. Three level [00:28:00] apartment buildings, where, which we've built using cross laminated timber or clt. and some of them we've incorporated, what an known as bathroom pods. that's where the bathroom is manufactured off site and then brought to site and, dropped into the building.

[00:28:14] And so on those, we were interested in a whole range of things, but particularly that the issues around buildability on site, supply chains and whether the different subcontractors could effectively work together to integrate the bathroom pods,that was more of a kind of onsite constructability,type of situation.

[00:28:34] I also guess testing the design process for that. whereas on other projects, we are doing more technical testing in terms of, interstitial moisture, um, certainly indoor air quality, and early in the design phase in some projects looking deep into the carbon. Aspect, and modeling a whole range of different design scenarios to see whether we can, [00:29:00] significantly reduce operational and, embodied carbon, in a cost effective way using different build solutions, different construction systems, et cetera.

[00:29:09] So it's quite a wide range of things that we are testing. Also waste, You know, we've got a big focus on construction waste, and on deconstruction, and the opportunity to divert materials away from landfills. So that's another thing that we do a lot of measuring or get our deconstruction.

[00:29:26] Contractors to do the measuring of what materials are they, are they bringing out of the building? When a building is at the end of life, where are those materials going? Are they being reused? are they going to landfill, et cetera. So we've got some, some targets that we report on directly to the minister and that we publish externally on that front as well.

[00:29:47] So there's certainly lots of measuring going on.

[00:29:49] **VIC:** Yes, absolutely. And I'm glad you raised that aspect of deconstruction because I think a lot of people now know that construction waste is a significant issue, and my [00:30:00] husband is a builder, and certainly as an individual builder, he thinks a lot about what he can do.

[00:30:05] Within the constraints of a system that is geared towards wastefulness. But I don't think lots of people really think about deconstruction, waste. And again, with a husband who specializes in renovations, deconstruction can be also very wasteful. I'm glad you raised that because I think as we think about what our opportunities are to retrofit our existing housing stock, those issues, Construction waste and how we can share lessons, from kind of order and beyond across the sector, I think will be increasingly important.

[00:30:36] **VIC:** So a really good one to raise there. I, I wanna just transition now from chat about systems to a discussion of world views and. You talked about the things that you learned in Scotland, which is, my ancestral homeland, and we haven't though talked about what we are building in terms of the worldview that we have here in [00:31:00] Aldo, as as a, a country that.

[00:31:02] Is moving towards being a treaty based nation. And I know that Kāinga Ora has aspirations to be a treaty based organization and we also have a diversity and a richness of worldviews, living and loving alora. And I wondered if you could tell me a little bit about how you go about integrating those world views into your view of sustainability and innovation.

[00:31:27] **ROHAN:** Great question. so this is an area that we are challenging ourselves on at the moment because my personal view is that we have got stuff to learn from other people in this space, and we've got plenty of space to. Doing things better? I think so. having said that, there's a whole range of ways that Kāinga Ora works with, ewe partners, Partners and a whole range of ways.

[00:31:59] And [00:32:00] sometimes that is where the, the ewe is developing housing. on their own land for their own people and want to partner with us in some way. Sometimes it's where we are developing, public housing, but it might be on lands that, the iwi owns and there is a relationship there in terms of that housing being for, iwi members, especially in the first instance.

[00:32:24] And then there's every kind of relationship in between. So the particular focus that I have in that area is where we are building, public housing. and we know that our customers that are really high proportion of our customers are Maori. And at the moment I think our, the responsiveness of our designs recognizes, Taha Maori in, in terms of tapo and nos of the spaces and the relationship to the spaces and the use of the spaces in the home, to some [00:33:00] extent.

[00:33:00] But that's one of the things that we are looking at at the moment. , we're looking to see could we strengthen that? and in particular, how do we make that work better in a medium and higher density environment? Because for kind order, we've moved from mainly building. You know, standalone homes or, duplex type homes to building much more, particularly in our three level walkup, what we call a three level walkup typology, a short apartment building.

[00:33:29] But we're also building lots of, new homes, in the area of the, of Auckland that I live in, that are more in the 5, 6, 7. Story apartments and those kind of spatial relationships and how, how our Maori customers want to live in relation to both in terms of the needs of FARO and how they want to live their lives, but also out of respect to, for those, concepts around TAP and Noah.

[00:33:53] And so we've been working with some partners in that space to identify how we can. From [00:34:00] what we are doing now to what we want to do and in the future and do that better. but I would say, yeah, my personal view is that we've got things to learn in that space.

[00:34:08] **VIC:** I think we are always all constantly learning around how we do better to express our culture within our homes and how we design for that.

[00:34:17] So it's great to hear that kinda order has turned their minds to that as well and certainly. For us, we are big advocates of the human right to a decent home and people being able to flourish and their cultures in their home is one of the pillars of that. So it is fabulous to hear that and I think a fantastic note to finish us up on.

[00:34:37] Thank you so much for your time today, Rohan, and your insights. And it makes me personally really excited, about. The role that kind order can play in really helping us to transition our construction sector and our approach to housing, to a great place that's much better forma, who we are all ultimately working for.

[00:34:59] So [00:35:00] thank you

[00:35:00] **ROHAN:** and thank you very much for the opportunity. It's been a lovely conversation.

[00:35:04] ?