

LFA Building Sounds Podcast: Biourbanism - Creating resilient cities for the 21st century, with Adrian McGregor, Yazid Ninsalam and Michael Cowdy (McGregor Coxall) - Transcript

ELIZA: Hello and welcome back to Building Sounds, the podcast exploring the stories behind the people, places and projects in our city, brought to you by the London Festival of Architecture, I'm your host, Eliza Grosvenor.

Last episode we explored the Design Future London Challenge in relation to the 2023 theme for the festival "In Common". In this episode, we're zooming out from the Royal Docks to the whole city, and to cities more widely - to think about how we can create resilient cities for the 21st century. To explore this, I'm joined by three people from McGregor Coxall - a multi-disciplinary design studio - and the people behind the recent publication: Biourbanism: Cities as Nature.

Adrian, Yazid, and Michael, could you each introduce yourself and your role within the studio.

ADRIAN: My name's Adrian McGregor, I'm the Founder and Chief Design Officer at McGregor Coxall, I'm also adjunct Professor at the University of Canberra and my role at McGregor Coxall is really in design leadership and innovation. I enjoy working with the global team, the studios and incredible people that we have.

YAZID: Hi there, my name's Yazid Ninsalam I am an Associate Director and Leader of McGregor Coxall CD research and development discipline, the biourbanism lab. I hold a doctoral philosophy in architecture and my role within the organisation is to deliver solutions to the rest of the discipline and also to develop a number of toolsets that feeds back into the resilient model that we have developing within McGregor Coxall.

MIKE: Hi my name's Mike Cowdy, I'm the Director of McGregor Coxall. I have been in McGregor Coxall now for 12 years and have had the fortunate position of being both in the Sydney studio and helped develop the UK presence. Our role and my role is essentially looking at growing the profile of our practice in the UK, Europe and the Middle East. And my expertise crosses all disciplines really, including landscape, architecture, urban design and environment and I do really enjoy the work that Yazid does in the research laboratory as well.

ELIZA: Amazing, welcome to this conversation everyone! To kick off this conversation I was wondering if we could explore a word that's come up already, that's biourbanism and the connected ideas that you explore in your book around 'cities as nature'. This is a word that I was unfamiliar with until quite recently so I imagine our listeners will be as well. There's a

big focus in your book and in your research around this, so could you give us an overview of what biourbanism is and what you mean by 'cities of nature'.

ADRIAN: Thanks Eliza, so biourbanism really describes a model that I've developed whereby cities are classified as a form of nature; but a human modified form of nature which is called an anthrome. The term anthrome might be new to people but it comes from the word anthracene and the age of homosapiens - human beings - which is ourselves. The key idea behind it is that it utilizes new urban sciences to effectively argue that human beings and the cities that we build exist inside the biosphere on spaceship earth and that the cities that we create and modify must be part of nature. What that means is that we need to rethink how we construct cities and how we design cities. Clearly a lot of the issues that we have now with the climate emergency, carbon emissions and many of the challenges that we are facing in terms of extreme weather etc. stem from this issue of a kind of a design crisis. The biourbanism model is a way of dealing with the climate challenges that cities are facing and to enable them to create resilience and to also try and maintain or create additional prosperity.

The book that I've written is divided into 4 chapters. The first chapter deals with the rise and fall of cities, it delves into the ancient roots of cities, when agriculture was first invented in the kind of fertile crescent of the Middle East. It tracks the progress of cities, and it demonstrates research around those cities that have been successful and those that have fallen. Chapter 2 then talks about the challenges cities face. Already today 70% of the world cities are facing climate challenges and that is impacting their prosperity and then chapter 3 outlines the biourbanism model. Chapter 4 is an outline for how a city can build a resilience plan, how do you go about creating a plan that can enable a city to deal with these extremes of weather and changes in climate and plan to future proof, its future conditions.

ELIZA: That's super interesting. I'm just wondering as you're speaking it seems like quite a different approach to what a lot of people are taking with the climate crisis, extreme weathers and different challenges like this. Where did the idea come from? What made you want to start on this project and then employ this slightly different approach?

ADRIAN: I think the genesis for the ideas is evolved through 25 years of practise at McGregor Coxall and the explorations that we've done at a large scale project level. That has triggered a kind of questioning of sense and how they function. We've been lucky enough to win a number of international competitions where we've tested some of these ideas at scale. Overtime those ideas have grown, going through university lectures and teaching studios and internally our team kind of collaborating on these ideas has allowed us to generate the outputs. In recent times we've been able to test biourbanism at city scale, we displayed and helped design two new cities from scratch. That has been a great sandbox for seeing how well these ideas work at that big design scale. So, there's been quite a bit of intensive research and then testing at the project level - it's been a very interesting journey.

The interesting story with the book is that if it wasn't for Covid, I'm not sure if I would have finished it. Being in my space and having that space to focus and not be distracted caused me to really concentrate. This accelerated the completion of this thing and for me it's been a 15 year journey so it's taken a long long time.

ELIZA: There's something quite interesting there, and I won't stay on Covid too long, but did you find that that period where the world shifted quite a lot in ways of working influenced the content of the book in anyway or was it quite separate for you?

ADRIAN: I don't think that it influenced the content but, I do talk about the global pandemic in the context that the world was able to move in unison very rapidly. We had world leaders united in an outcome and there was a great global focus on it. What I raise in the book is unfortunately we haven't been able to do the same with our climate and with carbon. There's been a reticence to move collectively and unfortunately this is leading to an ever-escalating series of issues that we're going to deal with in the future. Interestingly enough in the book I outlined that more than 10,000 of the world's cities produced more than 75% of the world's carbon emissions. Really cities are the answer to climate change, because if we can decarbonize and electrify cities globally, we can make deep inroads into slowing global warming. That's in the context of governance and nation states around the world working together with science organisations to really tackle Covid where I think we've been very successful, but it's a little bit exasperating to see that we're not moving at the same pace with climate change.

ELIZA: That's really interesting and I guess it links to the idea, in the book, of “uniting cities around the decarbonization of resilience, through a tool that is easy to use, plan and deliver opportunities to future proof the world”. There's something quite practical in that and these ideas that you proposed. Yazid, I don't know if you want to talk a little bit about how these fits into your area of your organisation on quite a practical and data led level?

YAZID: I think the question is centred around the idea that data is quite prevailing in today's day and age. It can be a powerful tool in helping create more resilient cities especially within the context of design and in being able to develop a simulation or model. We can invite designers and stakeholders through a process of democratising this access to information to be able to understand how their actions might impact various future scenarios.

One of the key things that we are doing here is developing an understanding of how environments react or have been directed in the past. By being able to understand the passing directions with the environment, we are then able to then project and identify areas that we can improve, especially within the context of our impact and the print that we leave behind, as well as the various social economic factors that would be quite demanding in order for cities to contain in the future. With this idea of digital twins, or developing a twin, or a doppelganger of the city that we live in, we will be able to understand the past experiences that we have. And then project future events that might take place based on the decisions that we make today. That's one the key important points which the lab and

the book that Adrian has developed in our practice within the context of using it as a platform or tool for communication and for testing.

ELIZA: So there's really interesting potential around what these digital twins and everything else connected to it can bring. I'm just thinking there's still a little bit of distrust - or perhaps lack of knowledge about how these systems are developing - around these areas. Have you found people, externally and internally at the practice, engaging with the platforms and engaging with these new ways of thinking and dealing with our cities?

YAZID: That's a really good question because with past experiences that we had with projects we saw a lot of more progressive clients who were keen on understanding how it can impact the way in which they design or the way in which they interact with information they have. Through that process we learnt a number of things whereby this idea of governance came to play the decentralisation of information and control of various aspects of the city. It's now being debated as information comes in and the requirements for more diverse groups or silent groups of professionals come together. To be able to utilise this as a platform for conversation and that has allowed many of our clients and even ourselves to then question what kind of efficiencies, we can achieve through coming together. And that is allowing us to be able to uncover ways of working together ways to co-author decision making processes, ways to manage change in terms of how we might be able to dictate next steps, especially within the design process or even the city building process.

So, I guess with every case study and every kind of project that we undertake, it helps us understand better how it becomes a way of thinking or way of doing. Especially within this day and age, data becomes a lot more abundant and the fact that we can then look back and be able to project future actions and steps in making our environments better.

ELIZA: Amazing, there seems to be a really nice play between the ideas that have been set out in the book and moving on the conversations around these sorts of topics. But then there are quite practical tools that come alongside it to put some of these ideas into context.

You've mentioned a few projects where you test this out and I don't know if you wanted to talk about the contact with the UK, Michael, and what role that these conversations and tools play in the UK. Because I know it's potentially slightly at a different stage of the conversation, and with different focuses within conversations, around the climate crisis. Do you want to say a few words overviewing that?

MIKE: Yeah, I think there's a difference between how the UK is naturally operating because it's formed of a lot of historical cities, old infrastructure and has governance structures that have been going for centuries whereas the new cities have the benefits of being constructed with all these technologies available. The challenge the UK and the UK's cities has is it's almost needs to retrofit itself with this new technology and allow that to make better

decisions and that costs money and budgets are challenging and tight. What we're seeing in two particular cities.

In London we've been working with Transport for London and helping collaborate and develop their sustainable development framework. Now although that's not necessarily tied into a digital twin, what it is starting to develop is science-based metrics as the key focus of where developments have to achieve and it's holistically looking at those targets. By doing this it's ensuring a more balanced outcome to places and end results, which is essentially what biourbanism is doing; that is, trying to create a more equitable balance across the different systems.

So the first kind of target seen in the UK is more KPI driven responses and so therefore the SDF is a good example of how KPIs are driving positive change to Transport for London's estates, who are pretty much the biggest estate holder in London. That has a huge impact on the social and environmental performance of the city if they get that right. But if we're looking at the data side of things and that layer which Yazid and Adrian talked about, the challenge the UK faces is that the current management of data is quite disparate. Data has different departments in different councils, typically with different procedures including how they create their data. This means that data doesn't necessarily speak to itself, and it can be designed in a way that doesn't necessarily say the things you want it to say. So there's a big issue there with that continuity of how data sets are coming together.

We've been working with Bristol City Council and a couple of the councils on how to start to look at climate resilience in particular. What we're seeing is there's an appetite for using data to understand the performance of a city, because ultimately data is trying to tell you how the city is performing in a live manner so that you can make more informed decisions.

The challenge though is the fact that to do that you're creating new infrastructure on old infrastructure and the systems also in council aren't necessarily geared up to deal with this. For example looking at departments and their funding mechanisms, the way councils' operators each department has its own fund its own budget and that's how it works. But that's not necessarily an intelligent way of building up a more rationalised holistic way of feeding in those budgets correctly. The idea of having an integrated dashboard system such as a biourbanism platform is that it brings everything together holistically. It allows you to start to make an almost collective decision of where money is and how it interacts with all the different systems, so it's kind of encouraging cross departmental funding. If we look at that just as a very basic example, if we look at cities in general, they will invest huge amounts of money in road infrastructure and they will invest very little money in their parts.

The road infrastructure is typically vehicles, and you'll see billions of costs in that. But the reality is we're aiming for is trying to reduce car usage, improve active travel and increase the quality public realm. To do this you need to reshift the budgets to think about those benefits. This may mean roads will get closed to become extended parks and spaces but then before you know it, you'll start to see holistic improvements to a place if it has a cross departmental funding mechanism; but if it doesn't have that, you can't do those changes. So

there's some fundamental things that governance systems in the UK need to go through to really start to take on board the change that's needed to achieve what biourbanism is setting forward as a vision: a more balanced outcome.

ELIZA: Amazing and have you had any examples in London or the UK where you been able to work through some of these ideas successfully?

MIKE: In a simple answer no. And the reason is because cities are really struggling to grasp the dramatic change needed. To have an integrated dashboard system requires a rethinking of the governance structure. While we are seeing changes happening, it doesn't happen overnight - that's the key thing. This is a thing that will happen incrementally, it needs to happen quickly, but it does take governance time to change.

In Bristol we have worked with them, and we proposed an integrated dashboard that allowed the council to better monitor their estate, how it's performing and start to allocate a process of costing projects through a more automated dashboard system. A system that people can connect to in the government to understand how those areas performing, put forward scenarios of how it could be improved, understand what that could cost, will therefore provide a more accurate assessment of what is needed. It's plugged into this wider dashboard to see how the whole cities performing and that was our proposition that was supported. But again, the issue across a lot of councils is that they don't have necessary the thinking or the budget to accept that an integrated dashboard is the right approach. It's going to take time for these councils to start to get on board with that because of the natural legislative structure that they're dealing with internally.

ELIZA: That's really interesting. And you've all touched on this slightly already, but what is important for you each individually on this research and the application of it now rather than later?

ADRIAN: Eliza I think that's a great question. We're facing a really uncertain future in many ways and if you look at the value of for example of global assets at risk, even say at 2050, there's estimates of US158 trillion dollar's worth of assets globally are at risk - that's already double the annual output of the global economy at the moment. The scale of this challenge for cities is gargantuan and in many ways, we're sleepwalking into the future; scientists have been telling us for quite some time about what's coming. The time has come to really act, those cities that move the fastest, those that actually start to harness these tools and plan intelligently are going to be the cities that are the most prosperous and successful in the future. Those that don't are going to face some significant hurdles and challenges.

I was in London with Mike and the team not so long ago and we looked at the UK property risk; for example, the climate risk to properties in the UK is already more than half a million properties and that's by 2050 set to be almost 3/4 of a million. The consequences of not acting are really significant and that's just simply the financial cost. If you then look at the impact on these assets and then the flow on to people and to citizens and communities, clearly there are some really big challenges to be faced.

One of the reasons that I've written the book is to create a call to action. It is to try and shift the thinking around cities and to encourage cities to move quickly. I hope one of the legacies is that we can encourage this ongoing conversation as Mike and Yazid are saying today. The kinds of information that we didn't have access to before can be extremely valuable in forecasting these future scenarios and then planning. Hopefully we're going to see the world decarbonize very rapidly, but unfortunately that's not really happening still and that is really disconcerting and disheartening. The global subsidies to the fossil fuel industries are still enormous and they don't seem to be changing very much. Of course so we've got to be positive about the future and we have to try to do what we can to change, but, like I mentioned with the Covid response, the world really needs to unite here, it needs to work together, and cities need to work together with governments and with business.

This is something that really needs to be tackled and tackled fast.

ELIZA: I think you're right. And I think that's coming to a good place to finish this conversation.

I would be really keen to hear from each of you before we wrap up - is there one thing that you would like people to know about this research these ideas, or one challenge that you'd like to put forward for people to tackle?

YAZID: In the London context, one of the key questions that was often asked as we were talking about this system of thinking and system of doing, is what kind of legacy would we like to leave behind? I think that question confronts a lot of us as designers building, contributing, through this footprint that we continue to cultivate as part and parcel of our day today and part and parcel of our professional remit. The legacy that I would like to be left behind would probably be a legacy of hopefulness, of being able to be quite conscious of the actions and the steps taken in my process or in my profession. I think that in itself, confronted by a multitude of governance styles or policies that we face, especially working within the local context or the international context, brings me back to why I'm doing the things I'm doing right now.

I guess that question itself of the legacy that you would like to leave behind through your work. Within the built environment in this day and age, I think that's a really big question that I'm trying to constantly ask as we contribute to projects and think about ways of doing things a bit better.

MIKE: I'm just going to jump in. I think in the London context, and this is in a city context in its general sense, a lot of the focus discussions we always end up leading in cities ends up really going around to the building and the architecture. 70% of the city is actually external realm, it's the roads, the actual laneways, the parks, the spaces, the waterways.

They typically comprise the majority of the city and I think those spaces hold the key to unlocking all of the solutions we've just talked about. It involves a dramatic mindset shift to

what the external realm can be. If you look at a city and you look out your windows, I'm sure you'll see a lot of grey space, now that used to be verdant landscape that provided a purpose in the ecosystem, and we disconnected are thinking from the ecosystem. So really what we have to start looking at now is how do we retrofit our cities and our grey infrastructure and start to look at nature more as an ally. I think it applies to London. London is facing some pretty stark projections with regards to its property at risk: 275 billion pounds of properties at risk and it's mainly within the centre, 6% increases in temperature, more impact on people's health, increasing mental health problems.

Those stats you can transfer to the cities around the UK and the world. The key to make cities relevant is to completely change that external realm and that perspective, because if we don't make that attractive, a valuable place for people to visit, people aren't going to go there. People aren't going to go to work as they prefer to work remotely -the relevance of cities could be a question. I think we have to radically rethink our perspective on the external realm because it's the external realm that will unlock the potential of what we talked about: creating more resilient outcomes for people.

ADRIAN: In closing, the discussions that we've had amongst the team and continue to have about London, I think a very interesting. It's an incredible global city and in many ways it's a tremendous role model for other cities, it's highly walkable and has a tremendous public transport network that underpins it. It certainly has some really strong attributes that position it as a great livable city.

London's challenge as it continues to grow and densify is around space, as Mike has mentioned. As population grows inside the city then the commensurate public amenity that's required for physical and mental health of the citizens of London also needs to be delivered. When that space doesn't exist physically then there are challenges in how you actually do that. We know that 70% that Mike has spoken about is crucial in the health and well-being of the city and as Mike and Yazid have said, if we can get more equitable distribution of investment across systems then clearly cities become more prosperous and ultimately more resilient. I think that the message for London is continue to do what you're doing, however, look to the future and look at the things that you need to do to maintain your prosperity.

ELIZA: Amazing and if people want to know more about your research, the practice or the book where can they find all the information?

ADRIAN: We have a website called biourbanism.info so that's a good place to start. Then the book is self-published it is currently available on Amazon Australia and we are very close to having a UK Amazon availability as well - it's probably going to come in the next couple of weeks.

ELIZA: Brilliant! That is all the time we have today, but thank you to all our guests today, Adrian, Yazid and Michael!

We will be back with a new episode next month. Until then, if you liked this episode, make sure to follow the channel and if you liked it why not give it a five-star review!
And if this conversation has got you inspired to find out more about the festival or the work of McGregor Coxall, then head to lfa.london/get-involved, or head to the show notes for all the important links.

Until next time!