



CLIMATE ACTION AND ARCHITECTURE

EPISODE 3 | TRANSCRIPT

0:00 MONA LEMOINE: We acknowledge that Indigenous peoples are the traditional guardians of this land we call Canada, in which we gather here today. We acknowledge the historical oppression of lands, cultures and the original peoples of this country and know we have a role to play in the path to decolonization that we share together.

0:15 MONA: We recognize our duty to fight for Indigenous rights to be restored and commit ourselves to the journey of healing. We thank the 630 First Nations, their people and ancestors who have taken care of these lines that we share.

0:30 MONA: Let us take a short pause, so everyone can reflect on their own acknowledgement and relationship to the land and be grateful for the diverse Indigenous peoples whose ancestors have taken care of the land for centuries.

Theme music

1:00 MONA: This is the RAIC podcast on architecture. My name is Mona Lemoine. I am a registered architect with the Architectural Institute of British Columbia, Senior Sustainable Design Specialist, and director of our Material Performance Lab at Perkins & Will. As Chair of the RAIC Committee on Regenerative Environments and a member of the RAIC Congress on Architecture Steering Committee, I am hosting this season of the RAIC Podcast on Architecture.

1:30 MONA: This season is part of a series of activities and events leading into the 2021 Congress on Architecture, and the development of a Climate Action Plan. The RAIC 2021 Congress on Architecture will be held on October 4, 2021, World Architecture Day.

1:42 MONA: In this episode, Wanda Dalla Costa, director and founder of the Indigenous Design Collaborative will be joining me to discuss the role of Indigenous leadership and pedagogy and climate action. Thank you, Wanda for joining us today. You're a member of the Saddle Lake Cree Nation. Can you tell us about your upbringing and how it has influenced your career?

2:00 WANDA DALLA COSTA: Yes. So, my mother was born and raised in Saddle Cree First Nation, and well between that and residential school which I know is a lot on the news these days. And so, every Christmas, Easter, every holiday, every summer vacation was spent in that landscape in northern Alberta. A really ideal, I would say, place to bring to someone's perspective. I teach architecture at a university now and I think what has been undervalued is that connection with the land, with place, with the stories of that place.

3:00 WANDA: I know from my connection with indigeneity, my cultural connection that landscapes, we call them story landscapes, so across every landscape that exists in the world, are a series of stories that our ancestors have passed down through generations. And so, the forest that we played in of course is never just a forest right; it what it is, is a place where histories come together and people have come together and learned and shared and offered those share things in the terms of in the in the form of stories.

3:25 WANDA: And so, I think when we think about architecture, I think this is one of those undervalued aspects connecting to that lived experience; connecting to those places that influence our view of architecture, and I think - I hope that in the future when we start to begin to, you know, rethink of what architecture could be, we begin to think in terms of our connection with land and the force of that place - of those places.

3:48 MONA: You also talked about your grandmother's house. I think you had some interesting stories there. Do you want to tell us a little bit about your memories of going to your grandmother's house?

4:00 WANDA: Yeah. The interesting thing is I'm here now you know, teaching down in Arizona and we learned an interesting statistic that 40% of the houses on the Navajo Nation are without running water. And people were quite shocked. I always included it in my class lectures and reminded people that there's other ways living. And my grandmother up on the Saddle Lake res, she also had no running water, and so it's funny that when you look back and you think, was this a deficit? I'm not sure it was a deficit.

4:32 WANDA: Yes of course it was inconvenient and we had to, you know, the haul pail from the well that was on site at her house and, you know, we didn't have the amenities like normal people do, have washing machines and so forth. But I think what it does is create a sense of awareness, when you have to carry a pail of water, you value every drop of that water. And I think when I used to see my grandmother, she had this old washing machine that used to sit on the porch of her little house on the res and it was a manual washing machine that she could load the clothes in and have a turning device that she would load this precious commodity that is water into that machine with the soap.

5:15 WANDA: And she was really conscious of every aspect of washing those clothes and I think this sort of connection in our brains between preservation, conservation, the actions we do on a daily basis, I think can all be increased when we look at it from these different perspectives. So for me, running a tap with when you're brushing your teeth, which I saw someone do the other day which was interesting to me because we haven't seen it for 30 or so years - that whole phenomenon of not thinking about water.

5:50 WANDA: But I think these early, early moments connected to my grandmother's house offered so many little learnings that contributed to the perspectives that I carry today. Gosh, it'd be great if architecture schools could begin to teach through these beautiful landscapes that have so much to teach us.

6:11 MONA: That's a wonderful way to think about it, kind of the opposite of that. I was in a meeting recently with the RAIC who's preparing their response for the federal government around national infrastructure assessment, and the lack of water on reserves came up as kind of a critical imperative for consideration by the federal government. And so, I'd be curious to hear, the antithesis of that positive story you told.

6:50 WANDA: I do live in a state of optimism. So, for me when I think about these, I think about what learnings I'm getting from each of these challenges that are in the past, you know similar to the learnings that were surrounding water on her house, on the reservation on the reserve. And I think, always of the challenges in terms of what am I learning from them so that I'm not feeling like it's a deficit.

7:20 WANDA: I'm always looking for the glimmer, what is it that I can take away from this moment. And so, I think it's a positive way to think things in the reverse or looking at it in the opposite way. I think you could just be overwhelmed by a lack of. And so, I think it's within all of us to really recreate our visions of the future, which architecture is a beautiful portal to imagine what could be possible what is possible. What is probable, what can we change to make our spaces that are places more meaningful and more authentic. So, it's one of optimism.

8:07 MONA: It's great. And you were the first First Nations woman architect in Canada. How does this shape, you and your approach to architecture?

8:13 WANDA: I think it comes down to the most important thing I think for me; holding that position is really to set the stage for the next generation. So, you know, the work. I haven't always taught at a university, that only came about full-time five or so years ago, but you know I'm at the end of my, 10 or 15 years left before retirement, and I thought it's time to share everything with the next generation that I have learned over the past 25 or 30 years in the business.

8:38 WANDA: And so, I think that's what it does, it gives you a sense of responsibility for the next generation to continue to open those doors and open the gates and sort of challenge the status quo in terms of this position that I've been blessed to have.

8:56 MONA: In the first episode of the podcast, Seth Klein spoke about the role of Indigenous leadership and facing the climate emergency. How can more Indigenous leaders influence the response to the climate emergency within the architecture, engineering and construction industry?

9:14 WANDA: I think part of that, that movement, that Indigenous people can be really champions and advocates for climate change and all the environmental challenges that that will come our way in the next couple decades. I think is connected to the worldview, which many Indigenous people hold. We call it a relational worldview which is where you are in a kinship relationship with the earth.

9:43 WANDA: So, we don't have the hierarchy that we see in the old texts of the Western world, where there's a hierarchy and there's a Dominion that we have over nature. Instead, we look at it as we are one with nature. Right. And so, the health, of course is the health of the weakest individual in the network; means the health implications for everyone will be compromised.

10:12 WANDA: And so, when we think of the natural world as a kinship, as a brother and a sister as a mother as a father. We think of this in a way that I think gives way to another way of thinking; that preciousness - just like the drops of water that our grandmother taught we're precious - are what comes into play. There's a term called relational ecology. This is the word, the term, the phrase that really describes what you're talking about, how can Indigenous worldview come together in service of the environment.

10:45 WANDA: And what ecology is it's just a relationship between men and the natural environment, but I think relational means that ability to rethink that relationship. You know ecology being the science of the habitat of the home where the natural environment is an old, old, old term, you know. And so, I think right now there's this challenge surrounding that dualistic approach to ecology. And I think what that brings us to or what it would bring us to in the field of architecture is really what does it mean for a building to be at one? What does it mean for people to be at one with nature?

11:25 WANDA: What does it mean for those boundaries? Are there boundaries? How can you know - back in the in the 80s I remember the big push toward removing those boundaries inside and outside? But if we really think of these as one ecology, what does that mean for our architecture?

11:43 WANDA: One of my students last year in the class, he created an underground agriculture center. Of course, it's really hot here where I teach architecture. And so, he was finding ways to bring that growing, that living plant life into a desert climate and his idea was very I think very Indigenous and of course creative, destined to provide us with a new pathway to thinking about ecology.

12:05 WANDA: And so, I think it's these sorts of ideas that are really coming from our next generation. I always say that my advisors are not only elders, but they're also my next generation are the ones who advised us and for our students to come up with ideas that serve that connection between men and nature, I think this is where we really need to focus our energies. What that next generation telling us is important to them.

12:30 MONA: You also talked about the analogy of Canary birds in a coal mine, and you told the story of the islanders sitting at a table, now in the water as a result of climate change and sea level rise. I wonder if you can kind of retell that story in your own words.

12:47 WANDA: Yes, that was a really vivid moment. The picture, I remember where I saw it from. I was at the Living Building Challenge Conference in Seattle, a few years back, and it was one of the leaders from that group, he's the one who showed that picture. The Living Building Challenge is sort of all about rethinking our relationship with the natural world through architecture. They support biophilia and so forth. And so, he's the one who showed that picture of the islander sitting at a table.

13:16 WANDA: And it was that reminder that they are sensing changes in the environment, because they live so closely to the land, you know, they live on a small island. And what was the positioning of their dinner table at a certain area around that perimeter of the island is no longer inhabitable because the water is rising. And I think it sort of sets forth an immediacy of action that we all really need to think about. And I think it should be guided by the people of course, who are experiencing these impacts.

13:52 WANDA: To give you a second example, we were recently asked by the Gila River Indian community here in Arizona, where I am for the time being, to create a sustainable house. And I said sure, what's important for the sustainable house? And they wanted to go back to their original Adobe building. And as I asked more and more, "Well why is it that you know, is it a cultural reason? What are the reasons?" and it was twofold.

14:27 WANDA: It was about connecting to culture of course, because that is their tradition. But there was a knowledge behind that Adobe home that they wanted to recreate. They knew because people still live in Adobe houses scattered across this reservation here in the US. People still live in Adobe homes. They're much cooler. And they ended up giving us a tour of a woman's home, she built it when she was six months pregnant, her and her husband, and with the help of their friends and family.

14:50 WANDA: They literally had a community to help them build a house over the course of a week. She still lives in that house today. When I walked in there in the middle of the Arizona summer, it was very cool at her house and she is planning to spend the rest of her years in this adobe home. And so, the more we started to study Adobe, we learned the thermal mass properties, the fact that the heat takes a long time to transfer from the outside, into the inside.

15:20 WANDA: And when it does transfer, which is about nine or ten hours later, that's when we want heat when we're in the desert, right. We want that heat to come in while we're sleeping at four or five in the morning. And so, she was living in what I would call the bio climatic architecture. An architecture that connects with the climate.

15:40 WANDA: And I think of the lesson from not only the canary birds that live on the islands who are perceiving of changes in our environment and are preparing themselves and preparing the world. I think back of those islanders and I think, what do they want to tell the world and what are the solutions that they're putting forward? and I am sure if people took the time to ask, they would offer.

16:05 WANDA: On the Gila River Indian Reservation, it's in the middle of the desert here and our utility bills, because of the heat and the increasing heat - you know, Phoenix is I think the 12th warmest city in the world. But it's increasing. And so, the Gila River Indian Reservation members there are feeling the impacts because they're having issues paying utility bills, they're increasing.

16:36 WANDA: There may be only one breadwinner in a family of three or four generations living in a house. So that financial responsibility can be really detrimental to the economics of that household, and they're paying these large utility bills for months on end here in Phoenix. Whether it could be, you know, four months it could be six months that they're paying large, large utility bills. The quality of construction is decreasing everywhere around us. It's all about efficiency and speed and profitability.

17:11 WANDA: So, the houses are just not constructed in a way that mitigates the climate in this region and that is why the here remembers have decided that they're going to take it into their own hands. They are seeing the impacts of the heat, and they want to change the architecture in their communities to be more bio climatic and more responsive to that kind.

17:32 MONA: And you're working with them to do that right?

17:36 WANDA: Yes, we are. Hopefully as soon as COVID releases us, we will be building the most sustainable house on a reservation in the USA.

17:45 MONA: That's exciting. In episode two, Harriet Harris reference Indigenous pedagogy and how it can shift the dynamic within academia. How have you come to apply Indigenous pedagogy in your role as institute professor at the Arizona State University?

18:05 WANDA: That's a good question. To me, pedagogy is teaching and learning. And I think from the perspective that the lived experience that I bring to the table, we are very aware that knowledge comes in a multiplicity of forms. There was a beautiful paper written about four years back by a number of Indigenous scholars from across Turtle Island when the legacy of Gregory Cajete and Jay Johnson, that that cohort, and they wrote a paper on sustainability.

18:35 WANDA: But within that paper, they talked about this beautiful notion of Indigenous knowledge as being divided in four types. So, they talked about - and this is how I like to teach architecture through if you can imagine when I tell you about the four types. Imagine that you're creating a building and you're trying to create a space for teaching, like this. So, let me start with the first example, empirical knowledge. So, this is the land-based knowledge that is gained from years and years of understanding and observation of a place over time.

19:06 WANDA: So, imagine if we're teaching our pedagogy through that lens, you have to be outside, you have to be

working in the place with the people of the place, so it completely changes. There's no more ability to import ideas. Right, it's all based on that empirical knowledge. And when I design a school or college, it's about integrating plants and that or the indoor-outdoor spaces somewhere where you can connect with that knowledge. So that's the first one.

19:38 WANDA: The second one is traditional load, so that's based on the stories handed down by people over time. And so, when I think of how would this affect the pedagogy, of course our classrooms should be filled with teachers from the outside world, not the teachers that learn from books and that craft their PhDs through the multiplicity of books in the library, but through people, and through the stories of the people, the lived experiences of people. So a lot of my classes are filled outside.

20:07 WANDA: Knowledge is coming to the university. And again, when we're thinking about how traditional knowledge would impact the way we think of educational spaces and how we could incorporate it sort of a broader pedagogy, I think, well, why are our classrooms designed with a hierarchy? You know, teacher at the front and the learners in rows. They should be as we do in our class: arranged in a circle where we are all contributing to the learning. It's a reciprocal form.

20:37 WANDA: The third type of knowledge that the scholars wrote in the paper was about the vision, this sort of ritual envisioning which is more of an individual way of connecting with knowledge. When I think of our schools and our universities and our K to 12 areas... how are we not providing spaces for these students to really connect with themselves? To have that knowledge that comes from within? I think that would be a phenomenal place for our university students to be able to have that available at all universities.

21:10 WANDA: And then the last knowledge is the conventional knowledge which is what we think the norm is in books and classrooms and so forth. So those four knowledges, together, to me are how pedagogy is changing, and how we're sort of bringing in a different way of looking at knowledge. It doesn't exist on the university campus. It cannot be contained on a university campus; it has to come from multiple different places and that's what we're aiming to bring to the table.

21:40 WANDA: Where does knowledge live and who are the people that can bring that knowledge to the university, that can supplement that more conventional way of what we think to be true. Of course, now we know there are multiple knowledge so we're not alone in this pursuit.

21:58 MONA: Great. So, you are also the founder and director of the Indigenous Design Collaborative (IDC), which brings together a tribal community members industry and a multidisciplinary team of students and faculty. How has your work with the Indigenous Design Collaborative responded to the effects of the climate emergency in First Nations communities.

22:17 WANDA: That's a great question. So, I started the IDC in 2016 and it was really a push to think of other ways of looking at the built environment. I knew from my early upbringing, you know, hanging out with our relatives up at Saddle Lake, but also from all the beautiful worldviews that I saw when I was overseas. It seemed more sustainable; they seem more ecological.

22:45 WANDA: They were still living closely with Mother Earth and close to the land. There wasn't a way of living that told us we had to live in high rises and told us we had to, you know, pile landfills up with the remnants of our consumers lifestyle, right. I was seeing other ways of looking at the world. And I think that's what the impetus was when I created IDC. It was really about how can we bring those other ways of viewing the world, back to a more conventional educational system.

23:28 WANDA: In terms of connecting with those world views that bring into the mix of ecology, relational ecology, the relational concepts with nature. It is really something that is happening without a lot of effort on my part. I shared with you the example of that student who when I said how do we indigenize a campus, his brain went immediately to growing plants and creating an ecology, under the earth, on the campus in order to be able to connect with nature.

24:00 WANDA: And there were a number of other solutions that shared similar ideologies as that student. So, there's another gal that created a space for meditation on campus. That was about telling the story of her people. And being

inclusive, of course, of all the other 21 tribes in this state as well. But it was through their association with what they grew in this area which was corn, beans and squash.

24:29 WANDA: For me I think it's really not so much about me, I don't want to say dictating, but we're projecting a philosophy to the students that's really giving them that agency. I think it's important for them to begin to understand how their culture connects with concepts like ecology, Mother Earth, place. And it's not so much a directive coming from us at the IDC but it is just giving them the space and the agency and the moment to be able to bring their worldviews into that intersection with the built environment.

25:03 MONA: Earlier this month, you presented at the RAIC Conference with Eladia Smoke on Funding Sovereignty and Lessons Learned from the Indigenous Homes Innovation. Could you talk to us about the Accelerator Funding pilot project? - and its ability to give power to a community's social justice while moving architecture from an exclusive practice to an inclusive one?

25:25 WANDA: So, we are working on a sustainable home in a very cold climate in southern Alberta, and also sustainable net zero homes here in the desert in Arizona. And it's interesting; both of the initiatives come from very different places, but I think are equally important. As I mentioned that the home we're working on, the net zero home here in the river; it's about energy justice.

25:50 WANDA: It's about climate justice. It is about spatial agency. Returning back to our ancestral connections with the built environment. And the house would be, you know, it's constructed by a firm, a construction company that has offered, because they bought into the idea. They have offered to build - at no charge - to volunteer to build that home as a pilot.

26:15 WANDA: They're interested in changing the paradigm of how construction is built in this climate. At the other extreme, here's this house in very far northern in Canada in a very cold climate, and the clientele are the people who are challenged by homelessness up on the Blood Tribe. We often say that there are very few homeless people in our communities because there's always a relative to take you in, right.

26:45 WANDA: The problem is less visible; I think than what we see in the cities. But in the end, you have a burden that is falling on those families who may not be equipped to bring all of the supports to these people in these homes. And so, the idea with the Alberta Net Zero home was to create a place at Tiny Home Village Development, where people could be given the concept housing first. Where you give the housing first and you believe the supports that will follow will truly help change their circumstances.

27:15 WANDA: But built into that development is also a support network where elders can come to connect with the community. Where community can be built around the shared kitchen or shared facilities, where all the residents are given a tiny little porch where they can sit out in case they feel like having a conversation with one of their neighbors, and where all of the buildings are built with a very high efficiency envelopes that will not drain the residents, or the band or the nation paying utility bills.

27:46 WANDA: Right there, both of these communities, whether in the south in the desert, in the north in our cold climate up north, are about increasing the functionality and the efficiency of people. Really thinking, and I would say, productively disrupting what we think of as building envelopes and quality standards in our First Nations homes.

28:23 WANDA: So, the house on the Blood Tribe spearheaded by the Changing Horses Organization is a very, extremely high efficiency envelope with abundant natural light, a lot of cultural features, distinctive identity so it doesn't feel like a social housing project. Each of the homes have a very unique identity, and we hope to be starting construction on that project this fall.

28:40 WANDA: And the one in the south has a number of really unique features that makes so much more sense in this climate such as an outdoor cooking oven. You know, it's 45 degrees Celsius outside, why would you want to turn on your oven and keep it on for a few hours baking dinner when you could be using an outdoor cooking oven.

29:08 WANDA: So, these sort of innovations that the communities are bringing forward, I think could help change the paradigm for many of the people who are learning to live in these extreme environments.

29:15 MONA: And so, how many homes are you building in the fall?

29:20 WANDA: We are doing eight homes plus the community center for the Changing Horses Organization. And in the south in Gila River, it's a one home pilot project and test stick.

29:30 MONA: Fantastic. In what ways does the traditional construct of the architectural practice constrain the ability to effectively respond to the climate crisis? In what ways does the approach you teach and practice enable us to respond more effectively?

19:44 WANDA: That's an interesting question and I think my mind goes to, you know, I often say that what are the metrics that we teach architecture by? I'm often overtly critical at the over reliance on aesthetics and economics. And I think what we're losing when we over rely on whatever those factors are, I think they're probably different for everyone, but I think when we over rely on certain aspects of architecture, we forget what it's intended to do.

30:15 WANDA: Really, it's for people. And I think when I work in the field of Indigenous design, there's a really beautiful reoccurrence that continuously comes into us producing architecture and that's value systems.

30:30 WANDA: So, whenever I'm in a community, we are always talking about a different set of values around architecture. And again, it could be connected to ecology, it could be connected to returning resiliency and sustainability, you know all of these other different concepts that that denote other value systems.

30:50 WANDA: As I was doing this research on why our value system is so critical, I noticed that there are other schools starting to talk about value systems in the built environment. For example, Harvard recently released a study called the Just City Design Values, where they had a list of about 50 or so values that they use to guide city making or urban design.

31:16 WANDA: I think this is the direction that the field of architecture could also potentially move. When I think of value systems and bringing those to architecture, moving away from the traditional metrics where we think about, you know, aesthetics or economics or whatever metrics that you judge architecture by and of course it changes for everyone, I think, towards the Indigenous research paradigm.

31:39 WANDA: So, Shawn Wilson wrote that beautiful book *Research is Ceremony*. And of course, you've heard many Indigenous architects talk about design, being also like ceremony, but Shawn Wilson created this four-part system that is, to him, the requirements of what Indigenous research means.

31:57 WANDA: And I think if we look at those four requirements and take that lens and look at design using his four metrics, which are methodology. How do we get there? What are the methods? Really, really thinking hard about the methods.

32:15 WANDA: Number two, he thinks about axiology, the value systems; what are the value systems that we are designing to? Let's articulate them. If ecology is a value system, let's articulate that, let's put it out there.

32:28 WANDA: The third thing he thinks about is epistemology or ways of knowing. And again, I've shared with you today that we believe there are multiple ways of knowing and I'm guessing that around the world there are a whole host of other ways of knowing that we can begin to integrate into practice.

32:40 WANDA: So, methodology, axiology, epistemology, and the fourth component according to Shawn Wilson is ontology, or ways of being.

Theme music

32:58 MONA: Thank you for joining us. That was an RAIC Podcast on Architecture episode featuring Wanda Dalla Costa. The final episode of this season's RAIC Podcast on Architecture will be released on July, 22. It will feature RAIC Congress on architecture steering committee member Joanne Perdue in conversation with World Green Building Council CEO, Christina Gamboa.

33:20 MONA: You can access the RAIC podcast on architecture on the go through your favorite podcast app. For more information on the RAIC Congress on architecture, and for future episodes, visit www.raic.org/congress2021.

Work cited in this episode include:

Johnson, J.T., Howitt, R., Cajete, G. et al. *Weaving Indigenous and sustainability sciences to diversify our methods*. *Sustain Sci* 11, 1–11 (2016). <https://doi.org/10.1007/s11625-015-0349-x>

Wilson, Shawn. *Research Is Ceremony: Indigenous Research Methods*. Fernwood Publishing Co Ltd, 2015.

Closed captioning and/or transcription is being provided as a public service solely for the convenience of our audience with the purpose of facilitating communication. The Royal Architectural Institute of Canada (RAIC) does not review for accuracy any information that appears in a transcript. RAIC makes no representations or warranties, and expressly disclaims any responsibility or liability with respect to, any errors or omissions in, or the accuracy, reliability, timeliness or completeness of, any information that appears in a transcript. In case of any inconsistency between the transcription and the audio recording in the original language, the latter shall prevail.