

CTBUH Journal

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Case Study: One Central Park, Sydney

High-Rise Housing: The Singapore Experience

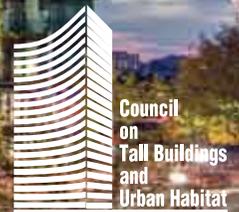
The Emergence of Asian Supertalls

Achieving Six Stars in Sydney

Ethical Implications of
The Skyscraper Race

Tall Buildings in Numbers:
Unfinished Projects

Talking Tall: Ben van Berkel



News and Events

- 02 **This Issue**
Daniel Safarik,
Editor
- 04 **CTBUH Latest**
Antony Wood,
Executive Director
- 05 **Debating Tall:**
Special Requirements for
High-Rise Luxury Apartment
Owners?
- 06 **Global News**
Highlights from the CTBUH
news archive

Case Study

- 12 **One Central Park, Sydney**
Jean Nouvel & Bertram Beissel

Research

- 20 **The Competition for the
Tallest Skyscraper:
Implications for Global
Ethics and Economics**
Christopher Michaelson
- 28 **The Emergence of Asian
Supertalls**
Jonathan Hsu & Cynthia Chan
- 34 **Achieving a Six-Star-Rated
Tall Building in Sydney's
Central Business District**
Lester Partridge
- 40 **Designing High-Rise
Housing: The Singapore
Experience**
Elena Generalova &
Viktor Generalov

Features

- 46 **Tall Buildings in Numbers**
Dream Deferred: Unfinished
Tall Buildings
- 48 **Talking Tall: Ben van Berkel**
From Block to Blob and Back
Again
- 51 **Ask a CTBUH Expert:**
Victor Madeira Filho
Tall Buildings' Impact on
"Rights to Light"

CTBUH

- 52 **Special Report: Shanghai 2014
Conference**
- 59 **CTBUH on the Road**
CTBUH events around the world
- 59 **Diary**
Upcoming tall building events
- 60 **Reviews**
Review of new books in the
CTBUH Library
- 61 **Comments**
Feedback
- 62 **Meet the CTBUH**
Vincent Tse
- 62 **CTBUH Organizational
Member Listing**

40

Social Issues

**Designing High-Rise Housing:
The Singapore Experience**



There is a loud thrum in Singapore, compelling the search for different models of high-rise housing. Singaporean experience shows that the high-rise is not just a construction phenomenon, but that an apartment is also a way of life. It is a way of life that reflects the unique of providing a range of housing options with affordable and comfortable living. There is a rapid growth of high-rise apartment buildings in Singapore, and the high-rise is becoming a way of life. This growth is based on the principle of sustainable development, involving environmental impact, and maximizing energy efficiency. It is a result of a number of public housing has been developed, including a set of required improvements of the way in the structure of residential development and apartment living.

Building to make residents feel that they are part of the community. It is not just about the building, but about the way of life. It is about the way of life that is sustainable, involving environmental impact, and maximizing energy efficiency. It is a result of a number of public housing has been developed, including a set of required improvements of the way in the structure of residential development and apartment living.

More than 80% of Singaporeans live in public housing, and 95% of public housing residents are owners. The wealthy have also overwhelmingly chosen high-rise ownership through their own means.

48

Talking Tall: Ben van Berkel

From Block to Blob and Back Again



Ben van Berkel is a Dutch architect and urban planner. He is the founder and CEO of the architectural firm OMA. He is known for his work on the Amsterdam School of Architecture and Urban Planning. He is also known for his work on the High Line in New York City. He is currently working on the One Central Park in Sydney, Australia.

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52

Special Report: Shanghai 2014 Conference

**2014 CTBUH Shanghai Conference
Outperforms All Predecessors**



The 2014 CTBUH Shanghai Conference was a major event for the organization. It was held in Shanghai, China, and was attended by over 1000 people. The conference was a success, and it was a great opportunity for the organization to connect with its members and to share its vision for the future of tall buildings.

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“In this global society in which citizenship might transcend traditional political borders, skyscraper symbolism is distinctly provincial, a source of jurisdictional pride and power.”

Christopher Michaelson, page 20

From Block to Blob and Back Again



Ben van Berkel

Interviewee

Ben van Berkel, Principal
UNStudio
Stadhouderskade 113
1073 AX Amsterdam, The Netherlands
t: +31 20 570 2040
f: +31 20 570 2041
e: info@unstudio.com
www.unstudio.com

Ben van Berkel

Ben van Berkel is the Co-founder and Principal Architect of UNStudio in Amsterdam and Shanghai. UNStudio is a network of specialists in architecture, urban development, and infrastructure. Current projects include restructuring the station area of Arnhem, the Raffles City mixed-use development in Hangzhou, over 30 stations for the Doha Metro Network in Qatar and the design and restructuring of the Harbor Ponte Parodi in Genoa. Currently he is Professor of Conceptual Design at the Stedelschule in Frankfurt am Main, and was recently awarded the Kenzo Tange Visiting Professor's Chair at Harvard University Graduate School of Design. Central to his teaching is the inclusive approach of architectural works integrating virtual and material organization and engineering constructions.

“I’ve never been so worried about individual buildings, but rather the collective skyline. [In a good skyline] you don’t mind that some buildings are quite close to each other, because they have an identity as a group.”

United Network Studio (UN Studio) is a Dutch architecture firm founded in 1988 by Ben van Berkel and Caroline Bos, which in the 2000s established offices in Shanghai and Hong Kong, partly to accommodate the firm’s increasing number of highly detailed and demanding tall building projects on the Asian continent. One of these projects, the Ardmore Residence in Singapore (see Figure 1), was a finalist in this year’s CTBUH Best Tall Building Awards program. Van Berkel paused to chat with CTBUH Editor Daniel Safarik on a recent whirlwind visit to the Illinois Institute of Technology, Chicago.

We’ve seen a lot of creative projects in Singapore in the last couple of years, and I’m wondering what kind of client commissioned the Ardmore and what made them interested in having such an intricate design? How were they convinced on the morphology of that building?

The beauty of that client is their architectural background; they have worked with many interesting architects like Philip Johnson and Paul Rudolph. Also, four of the brothers of this client live in a Paul Rudolph residential building called the Concourse, so they have developed an incredible interest in architecture. Also, I like Singapore. When I was there I was fascinated with the city, its culture, and its regulations. They are quite tough in terms of their organizational needs; for instance, landscaping needs to come into the first floor of the building. These requirements are tough, and can make it very challenging to design such an articulated building, but are ultimately beneficial.

Clearly, a client that had an appreciation of Paul Rudolph would also have an appreciation of sculptured concrete, curvilinear organic shapes, and rough materials.

Exactly, and then of course we came up with the organization of the building based on the optimum views we could get within the units. So the living room area is a column-free space, with an incredibly nice span of more than 12 meters. Each apartment also has double-height windows with a longitudinally interlocking double-height balcony set into the concrete structure. This worked really well.

There is still a stigma about tall concrete buildings in North America, and to some degree in Europe, whereas people in Asia

have completely accepted them. Then again, you don’t often hear “double-height windows,” and “concrete” in the same sentence. So you must have resolved that with some pretty interesting engineering.

Yes, but with the incredible knowledge of this client, I’ve noticed that collaboration is key. We also do everything digitally now – and we test these things out very early in the design process. I do it more and more, where I come up with a proposal in the preliminary and schematic design phases, and we test the slenderness of the building or the column-free living areas, and see what we can do for the sustainable components of the building. For instance, this building is totally open on the side where you have little sunlight, and it’s



Figure 1. Ardmore Residence, Singapore.
© UN Studio / Iwan Baan

very much closed on the side where the sun moves around the building. So the building doesn't get oversaturated with heat, but you also have thermal heat retained into the evening. Another thing that's nice about the double-height balconies is that they collect wind into the evening. After 5:00 p.m., that really helps to cool down the building.

It was a wonderful project to work on and we only had 1.5 years to build it. The client took a lot of time to develop the project, around three years, but we had very little time to build it.

So once you began construction there was no going back?

Correct. For that reason I could show you in detailed drawings that there are 16 modular elements for the entire façade structure that could be pulled and twisted in many different ways. They were repeatedly used in different areas of the building. In this way, we developed a highly efficient strategy for making quite a complex building.

The appearance of the building suggests that it is hewn out of a solid piece of rock, but it seems that nothing could be further from the truth. Did you use modifiable formwork, or did you pre-cast the concrete and raise it up?

We precasted it, but it was interesting, because the Japanese contractor that was used had techniques to move up the casting while they were moving up the building, and they did a lot of casting on the spot. They said that it was the quickest way for them to operate. So they moved upward every day, and the crane would lift the next piece into place while workers completed the previous section.

You mentioned that you like Singapore and the constraints that it presented. It seems like a very civilized place. I have seen a statistic that 80% of people in Singapore live in high-rise public housing, and probably close to another 10% live in market-rate high-rise housing. Why do you think they have taken so well to high-rise living in Singapore?

You know, it's the opposite of high-rise living in Europe, where it used to be more common. Today, to lure tenants, high-rises are



Figure 2. Canaletto Apartments, London – neighborhood in the sky concept. © UN Studio

complemented by increased services and amenities. On the other hand, in Singapore, they are better controlled. There are people that take care of the public spaces, and tenants pay fees to ensure proper maintenance. A sense of community is also generated when long-term tenants agree on new ways to maintain their building. So it's quite well organized.

It sounds a little bit like the New York co-op model.

The advantage that many clients like when they buy a high-rise unit is that they have, as a community, a say into how they would like to maintain the building. This concept can be very beneficial for some projects.

It is one that I am trying to instill in another project we are working on in London, called Canaletto (see Figures 2 and 3). It's another high-rise we are doing in the area of Islington, which we characterized as a "neighborhood in the sky." While developing the project, we thought a lot about context, where, in this case, there are a lot of startup companies. The whole area has been an inspiration, as has the client. They want to include all kinds of crazy amenities, like a restaurant on the ground floor where people can meet and interact with their neighbors.

How is it different facilitating a community environment in London rather than Singapore?

The thing that's so nice about the market in London is that it is younger, if more commercial. So when I proposed to them the idea of a neighborhood in the sky, I presented it as a type of social enterprise that informs how the building could be used. We want the

young entrepreneurs to be able to buy these units, and the price structure of units in this building helps with that. There are affordable units and also very expensive units, and they all share these types of amenities like restaurants, a cinema for families, a gym, a pool, and a club. So we took a contemporary approach when looking at how we could fill in the commercial component.

What I've learned over the years, even when we do a department store, we say to the client, "Why don't you think of a department store that looks like a museum?" because objects in a museum are also fetish objects. When Andy Warhol talked about his fascination with shopping, he talked about



Figure 3. Canaletto Apartments, London. © UN Studio



Figure 4. Raffles City, Hangzhou. © UN Studio

how after we die, we could all end up in a Bloomingdale's or something. So when playing a double-role towards the way we fill our projects in relation to contemporary questions, I answer mostly with cultural effects and ideas. I answer with new forms of living that are related to social behavior when we design these projects.

We have gotten to the point now where architects are constantly being told that they can't socially engineer solutions. You hear things like "we're not here to solve the world's problems." But when there is a brief, how do you match a client with your philosophy when it comes to mixing programs, or the idea of having neighborhoods in the sky? Or do they come to you knowing what to expect?

It really needs to work. I cannot sell something or conceptualize an organizational structure where the client is not fascinated by the idea. So I need to really convince them. I really believe in these ideas. I believe that a monotonous residential tower is not good for the city, so I really try to convince them of that idea. I tell them, "Why don't you do building that is recognizable, where people can really look at it and say, 'Listen, I live in that cluster, that's my neighborhood?'" So you can really tell the client – not only a story – but an argument that can cause them to imagine these places and adopt these beliefs. For instance, the "neighborhood in the sky" idea works very well for clients when you talk about the different qualities of apartments

that can exist in these places, and this fits in their story too.

I've noticed that the shapes of a lot of your buildings lack right angles, and you have a lot of organic and curvilinear forms across all kinds of different programs, cultures, and cities. Is there a UN Studio "look?" Are you concerned with a style being shared across buildings and being identifiable, or do you find that these curvilinear solutions are very natural for more conditions than one would expect?

I think it comes down to tools. In the 1990s we were always talking about tools. So we wrote a book once called *Move*, which talks about the role of the architect and how the architect influences the use of new techniques, and also how these techniques will have an effect on the imagination of the architect. So that is what we have learned: new tools generate potential new boundaries you can shift in a profession. Not in form alone, but also in the organization of the building.

Speaking more broadly, what do you think about the design of tall buildings that needs to change? You've heard the figures of China urbanizing 250 million people in a dozen years, only to be followed and surpassed by India. A lot of high-rise designs are just a continuous extruded floor plan that goes from bottom to top. How can we work against this at the rate that we need to be building and urbanizing?

That's a good question; I think this can only be done by rethinking the concept of the high-rise building. Do we have to think of a traditional skyscraper concept? Can we find new ideas? New models? For instance, the idea of "neighborhoods in the sky"; I think it's a matter also of how you accept vertical architecture in a particular manner. If you look at Manhattan, how many interesting vertical buildings do you have there? Not many, maybe a few. But as a skyline, they look quite beautiful. So I've never been so worried about individual buildings, but rather the collective skyline. This is where the quality of urban planners comes in. In Singapore they do this very well, with planners looking critically at where high-rises and density can take place. It

is amazing; when you're there you don't mind that some buildings are quite close to each other, because they have an identity as a group.

Going back to your former question about geometry; my work is a little bit more transformative. It's not so much that the rectangular form is not present in my work – I am actually interested in the rectangular form – but I'm more concerned with how the rectangular form can move slowly towards a curvilinear form and how rectangular and curvilinear forms can support each other. I've once said "maybe we can move from block to blob and back again." And who cares about the stylistic reference of "block" or "blob?" It's more the transformative aspect of geometries that are fascinating for me.

Some of your buildings appear to be in motion or in the midst of a transition, frozen in time, which is kind of an interesting way to think about development in rapidly developing places like China. You mentioned previously that you find the restrictiveness of Singapore to be a benefit in terms of getting good architecture built. How do you feel about China?

China is a little bit more difficult. In China, I wish that the regulations were a bit tougher sometimes. It's a bit more complex, because a client might be over-organized and have very strict reasons for the building having a certain type of organization. So I've had to learn over the years to convince clients, councils, and city departments; [I've had] to come up with ideas that are convincing.

For instance, Raffles City in Hangzhou (see Figure 4) is going very well, but it took us an incredible effort to get the twist in the tower and for the podium to be highly articulated and very open. What the client wanted was a social, sustainable project for Hangzhou that would allow people to stay in the location a little longer, but would not require vehicles to get around. So in this project you have almost every program imaginable, in order to allow people to stay there as long as a week, which is quite amazing. ■