



Green Alert

Perspective recently sat down with six progressive Hong Kong architects to let some fresh air into the subject of sustainable building

TEXT: STEVEN OBROVAC & MADHAVI TUMKUR PHOTOGRAPHY: DICKY

Hong Kong is not immune from the man-made phenomenon of climate change — and nor will it be spared its consequences. But while other cities and nations (including mainland China) have taken the regulatory lead in encouraging building technologies and practices that at least help to minimise the worst effects of global warming, the common perception is that Hong Kong has stood still.

A very visible part of the problem is the essential nature of the city's built environment. It doesn't take an expert to realise that urban Hong Kong is largely comprised of structures which are often dramatically unsuited to the local climate, planned in such a way that obliterates rather than capitalises on existing natural amenities. Making buildings and developments of this type inhabitable necessitates an extravagant use of energy. The bottom-line is starkly simple: low efficiency equals higher demand equals greater pollution.

But perception doesn't always how close to reality. For a progress report on sustainable planning and design Hong Kong, Perspective, the HKIA and the AIA Hong Kong brought together six prominent architects to discuss the issue. The results were at points alarming, encouraging, contentious and even infuriating — but always revealing.



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《透視》在此感謝美國硬木外銷委員會對圓桌會議的全力支持



Key:
Alexander Wong: AW
Daphne Chan: DC
J Lee Rothkind: JLR
Joseph Wong: JW
KS Wong: KSW
Richard Hawkins: RH
Shiqiao Li: SQL

Participants in the first round-table discussion

- Alexander Wong**
Director of Asiacity Architects
- Daphne Chan**
Architect, Development and Construction Division, Housing Authority, HKSAR
- J Lee Rothkind**
Managing Director, BUZ Design
- Joseph Wong**
Lecturer, Division of Building Science & Technology, City University of Hong Kong
- KS Wong**
Associate Director, Ronald Lu & Partners (HK) Ltd.
- Richard Hawkins**
Chartered Architect Partner, Foster and Partners.
- Moderator: Shiqiao Li**
Associate Professor, Department of Architecture, Chinese University of Hong Kong



SQL: Let's begin by trying to find out where we stand now. Two basic questions are: How do we define the issue for Hong Kong; and in relation to the building industry, what are we doing currently in response to it?

JLR: There are some issues coming up right now, such as the redevelopment of the police headquarters on Hollywood Road, the redevelopment of Wellington, Peel and Graham Streets and the wet market area — they are very insensitive to these areas, considering that Hong Kong is striving to be an international city. This is very surprising to the profession as to why it is still happening.

DC: It is my general feeling that the main problem in Hong Kong is the ultra-high land value, as well as insufficient awareness of and respect for the value of culture and history. These are the major challenges that the government, developers and practitioners are facing in balancing the economy and the environment.

AW: I think we're just looking at the tip of the iceberg. Hong Kong is a very small part of a global problem which is so not just for architects — the whole set-up of the economy of the world is based on fossil fuels. If we do not deal with this issue right now and stop this lifestyle, we won't have a future at all. And it is so serious that we keep on forgetting about it. We can't keep on living in high-rises built with glass walls, cooling them down with air conditioning and then complaining about the rising cost of electricity. We can't continue creating buildings as if the future is not an issue. The way we live is so extravagant and unsustainable that we have to go back and really think about the whole

structure of society and how it is related to energy. I think we as architects do have the responsibility to create or at least propose some kind of approach towards the next generation of buildings that could at least help to reverse the process of environmental destruction a tiny bit. And we at Asiacity did make an attempt. It is a small attempt, maybe even feeble, but we have to start somewhere. If we don't start now... well, we are only talking about 50 years. By 2050, there will be nine billion people on this earth, and we can't sustain that. Not this lifestyle, certainly, of buying a sea view and three cars and 20 handbags.

SQL: There is of course a broader issue how we live our lives. Forty-eight per cent of all greenhouse emissions are created by buildings. Of that, almost 80 per cent comes from systems like air conditioning and lighting.

JW: In response to Alex's points, there is nothing wrong in getting a sea view. A sea view and sustainable building are not mutually exclusive. But sometimes local architects don't put in enough effort to calculate where the bulk of energy is being used. When you look at many buildings, they are more like buildings with green features as opposed to green buildings. So basically they build an apartment block and then add the shading, turbines, solar panels and whatnot afterwards. All these problems can be avoided if you just orient the building properly. That is something we should be looking at. One of the problems we face today is that when we talk about sustainable design, there is too much emphasis on the environmental side while the economic and social side tends to be overlooked. We should be looking to balance out all these aspects.

The Participants:



Alexander Wong
director, Asiacity Architects & Jidou



Daphne Chan
architect, Development and Construction Division, Housing Authority, HKSARG, Hong Kong



J Lee Rothkind
managing director, BUZ Design



Joseph Wong
City University lecturer from the Building Science & Technology Division



KS Wong
associate director, Ronald Lu & Partners



Richard Hawkins
chartered architect partner, Foster and Partners

Moderator:



Shiqiao Li
associate professor, Department of Architecture, Chinese University of Hong Kong

JLR: In America we make our buildings handicapped accessible because we are forced to. And so if there was legislation in our building codes here, we would be forced to orient the buildings in the correct direction, or even to have energy saving mechanisms. But I don't know if that legislation exists.

RH: It is a global problem and I entirely agree that without sustainability there is no future. But I feel very optimistic about Hong Kong. If you look at the rest of the world and then at Hong Kong, you realise that Hong Kong actually has some very sustainable practices — high density high rises, a very good public transport system, etc. The problem of course is that the region of southern China is highly industrialised and fossil fuel reliant. In terms of legislation, I feel that very soon in China there will be legislation. I think that in Hong Kong the HKIA can play a big role in assisting the authorities as to what the legislation should be.

SQL: There is a bit of an irony here in that Hong Kong is sustainable because it exported all its industry and pollution to China...

AW: J Lee mentioned that if the government offers incentives to create buildings that reduce energy consumption... I think that is something we can look into, as it is the most practical and the fastest way. And it would actually work.

DC: Some of us have mentioned double glazing, tinted glass and sheer walls.

AW: Yes, and they need to be insulated and of course due to the efficiency of the extra GFA going down, making the walls thicker, it is not going to be attractive to buyers. It has to be enforced for a person to do it, and not just in the form an incentive. It has to be top-down.

DC: Actually the government has a regulation for commercial buildings, but with respect to domestic buildings, it is only a joint practice note which offers incentive to developers — put up these green features and you can get an extra GFA or GFA exemption. The other thing that can be done is education for consumers. I think if consumers are made aware of the situation, they will not look at buildings just as commodities for short-term gain, but instead look at them in the longer term and say to themselves that 'I will pay a little bit more now, but I'll save a lot on electricity in future'.

KSW: I think the long-term benefits are well known. Green buildings in truth do not cost more — about one to two per cent more in some extreme cases. A survey done in Hong Kong last year by Poly U showed a similar result.

RH: We did a project recently in Shanghai. We went to look into the whole deal and realised the cost is about 10 per cent higher.

KSW: Some particular features can be expensive. But for some other constructions, reasonable or better performance can be achieved at a much lower cost.

RH: It is therefore important to educate people that performance and efficiency is a very valuable thing in a design. If you can persuade someone that it is worth spending money on a well-designed building — just like buying one really good handbag that will last you 20 years as opposed to 20 mediocre ones — that may have an effect.

AW: We have already talked about the government, local developers and the market. This is in the end driving the whole motion of development. There are two other areas that are



not spoken about. One is the research institutes. There is no money for such institutes. The amount of innovative ideas is actually very limited. For instance, although there are air conditioners, there is no modulation and either we are very cold or very stuffy. We have to revamp the whole system. Maybe we have to look at old-fashioned ways and learn from them. We therefore need a lot of research for new ideas.

JW: Even locally, there is a lot of research done on air conditioning systems, but not by architects. I hate to say this but we are sort of marginalised, in that we don't even have our own panel in terms of vetting for the rights for research in the universities. We are actually locked together with law, planning, humanities and others — that is our panel, and we are the 'others'. I think a couple of years ago there were some 800 grants given out, and just one of them was for architecture. It seems they do not think of architecture as an area of research. In a proposal for sustainable design we require data on social side, the economic side, the cultural side. One of the reasons that we want to be environmentally responsible in our design is that we want to create a responsible environment for people to live in. But somehow that has been interpreted in terms of temperature and ventilation, etc. First of all, we are building all these buildings which no matter how sustainable they are now, we will have to tear them down if they are not going to satisfy new sustainable needs. So what are we going to do about that? Tear them all down to rebuild them all over again?

AW: You have an interesting point there. Not only do we have to build new buildings that are energy-saving, but also think of what we're going to do about the old buildings that incur a cost to tear them down. I think we have to treat them in a positive light. Maybe all they need is insulation and a few other changes to reduce their energy consumption by 10-15 per cent. We need to start looking into it.

JW: We are doing some interesting projects where we are refurbishing and renewing old buildings, but most of them were done because we had to do it or some for heritage value. We are renovating some public toilets and that is a good area to get into. What we build today will become old buildings in the future. So why aren't we designing buildings that can be reused in the future? I just don't see local architects addressing this point.

DC: As it goes — 'Reduce, Reuse and Recycle'. As architects we need to abide by these 'three Rs'. But in Hong Kong there is the mindset of rebuilding only after demolishing the existing structure.



JW: About 10 years ago, research was done by the housing department board. Over 50 per cent of public housing tenants will do something to their units before they even move in. They'll tear down walls, throw away cabinets, create a lot of waste.

DC: These days we try to learn more about tenants before they start to furnish the apartments. We also conduct residents' surveys where we ask them what they actually need. However, according to these surveys, it seems like they want as much put in the houses as possible, because a lot of lower income people want to move into an instantly liveable space. It really depends on what the tenants will accept. I think it is nice to offer them choice. This is just my personal thinking.

JLR: I just want to show a glimmer of hope by mentioning an eco-project just outside of Guangzhou. A private developer funded the whole project by himself and chose to only put 50 villas in a bamboo forest. He hired some architects who were almost like eco-warriors, and working with a developer they created a successful sustainable project using local materials and bamboo.



AW: I think it's important to know about such projects. That's a great start.

SQL: So what are everybody's thoughts about the future?

JW: One issue that we have not touched on is about the planning process. The public is not involved in the design stage of the process. In order to have an environment that is sustainable from the social side, there needs to be more participation from the public. I was involved in the Kai Tak redevelopment and we have been trying to engage the public in the consultation. We need to find new ways to involve the public. It is the sustainability of the process itself and not just one-shot planning.

DC: Sustainability, apart from just building green, must include social and cultural dimensions. Joseph has talked about public engagements and that I think is very important. We should try to generate a sense of belonging and identity. Apart from providing just a good, healthy physical environment, hopefully spiritually people can also be satisfied. Holistically I wish that we as the public can voice our concern and the government and stakeholders can do their own part.

RH: I think our mission is to increase awareness and the needs and benefits of sustainable design and push forward the message that good design is sustainable design and sustainable design is good design. Our buildings will speak for us.

JLR: I think we do need the support of the public for any kind of changes that will happen in future. When I think of my education in America 30 years ago, we were taught about the environment to be

able to practice them with our clients. Now my peers are becoming policymakers and we are seeing differences such as in Chicago where the support for green movement is fabulous. Whereas in Hong Kong I believe it has been instilled in primary education. If kids have it as a part of their curriculum, it will be 30 years before they become policymakers... by which time we will already be in deep trouble.

KSW: We have to be positive and have a can-do attitude. Our current path is not sustainable, either culturally or ecologically. So the issue is how fast can we change. It's been rightly pointed out that we have known and discussed this issue for three decades. For every 'green' conference we had similar topics, similar terms, similar barriers. It is the rate of change that is very important. So the key point is to transform the market. The market is really the essence. We need to catch up, and soon.





綠色警號

《透視》最近邀請六位香港建築界的活躍份子共商可持續發展大計，為這個爭論已久的話題帶來一些全新見解

主編 STEVEN OSBROW & MAHANI TUMKIR
編輯 DIQY

香港一直意識到，這片小地方不會倖免於全球氣候變及他們所帶來的最終後果。可是當世界各地（包括中國大陸）都開始推行新建築技術及措施去力挽狂瀾，嘗試減低全球暖化所帶來的惡性破壞之際，香港在這方面似乎仍在原地踏步。

最顯而易見的問題在於香港先天性的建築環境。即使不是專家也意識到香港市區大部份建築結構的設計都不配合本地的氣候，規劃手法也只是一味拆毀再建，不懂得充分利用現存的建設生態。要令到這些建築及發展項目變得適合人類居住，唯有花費大量的能源去粉飾，低效益引致高需求，高需求帶來嚴重污染，很明顯是一個連鎖反應。

不過一般認知有時不代表事實的全部。《透視》最近聯同香港建築師學會及美國建築師協會香港分會舉行圓桌會議，邀請六位著名建築師暢談本地可持續發展規劃及設計議題，作為有關方面的進度報告，多元化的討論包括環境告急及鼓勵更多改善之外，更引發一輪爭辯及憤慨！當然更帶來深刻的啟示。

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SO: 我們就從現在的狀況開始說起。兩個問題：香港目前的可持續發展情況是如何？而建築界正在以什麼方式去回應？

AW: 最近一些有關環境成為城中熱話，例如荷李活道警署總部的重建計劃，中環威靈頓街、卑利街、高威街及露夫街一帶的面貌重整，可惜香港作為一個國際城市，卻不擅於營造保育，建築設計同行都深覺驚訝。這些問題竟然不斷一再發生。

DC: 總體來說香港最根深蒂固的問題是高昂的地價，對於文化和歷史的關心甚至基本尊重都欠缺。政府、發展商及所有建築設計從業員要面對的最大挑戰，就是如何平衡經濟及環境的訴求。

AW: 我認為這些只是冰山的一角。這是全球性的問題，也不單是建築界需要面對的問題。香港只是牽涉其中的一個小地方。現在全世界整個經濟體系都基於石化燃料，如果我們不正確視和改變目前的生活方式，將來就完全沒希望。我們知而不知，繼續居住在玻璃幕牆的摩天大樓中，靠空調降溫然後後拆毀電費驚人。我們不能再建造一些沒考慮將來的建築物。我們生活奢侈而浪費大量資源，真的有必要停下來想一想整個社會的結構及相關的能源問題。作為建築師，我們有責任去實踐或提出新一代的建築主義，至少略為減低環境破壞的速度。我們洋務有限公司有踏出第一步，可能只是微不足道的，但必定需要有人帶領，否則舉例說大約20年後的2050年人口會增長至30億，地球根本容納不了，沒可能支持人買一間海邊大屋、三架車和20個名牌袋的奢華生活。

SO: 如何改變目前的生活當然是更廣闊的課題。據統計50%的溫室效應對來自建築物，當中差不多50%是從空調或照明系統散發出來的。
AW: 回應A君剛才的論點，住海邊大屋其實沒問題，海邊大屋也可以融入可持續概念，兩者不是徹底對立。不過本地建築師有的環境花太多心機計算能源消耗。很多大廈都有綠色的設備，但它們始終不是完全綠色的建築，只是在公外加一些燈光板、渦輪機、太陽能設備諸如此類的東西，如果能夠安排一個好的建築結構，這些東西根本不需要。我們需要深究的一個問題，是每當提到可持續設計概念時，通常只注重環境方面而忽略社會及經濟的考慮，這三方面一定要平衡地兼顧。

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IR: 美國的建築物全部規定要有環保人士設備，因為這是法律規定。如果立法管制建築規格，大家就必須朝著正確的方向走，甚至制定配備一些節能的機制。我不知道香港有沒有這項制度。

AW: 我絕對同意可持續概念是關乎未來存亡的全球問題。不過我覺得香港的情況還算樂觀。環顧世界各地再看香港，你會發現香港相對實行了不少可持續理念，例如高密度高地勢，還有健全的公共交通系統等等。當然高度工業化的南中國地區仍然倚賴大量的石化燃料，不過相信中國很快也會立法管制，而香港及香港建築師學會可以從中擔當關鍵的角色，協助當局制定法例的具體內容。

SO: 香港的可持續狀況是來自再生產及所帶來的污染全部轉移到中國大陸，這的確有點諷刺。

AW: I 君提到如果當局可以鼓勵興建節能建築這一點非常值得研究，因為這是最有效和最快捷的方法，而且相當可行。

DC: 在座有幾位曾經親及雙層玻璃窗及染色玻璃幕牆的問題。

AW: 沒錯。這些玻璃窗必須隔熱，同時由於玻璃面實用面積下降令牆身增厚，對買家來說也不吸引。當局一定要找人強制執行而不是單單鼓勵。制定從建築到細節的規則及設計。

DC: 政府其實有立例管制商業大廈，至於住宅物業就只有聯合備忘錄去鼓勵發展商，只要在大廈加入一些環保設施，就可得到額外的樓權面積或總樓面面積免作為獎勵。另一方法是教育消費者，如果消費者意識到目前的情況，他們就不會將樓宇當成短期利潤的賺錢工具，從而將目光放得更遠——今天付出少許額外金錢，長遠計可以省下大量電費。

KSW: 這些長遠效益是眾所周知。綠色建築其實沒什麼額外成本，極其量也只是比一般建築

多出一半至20%。去年香港理工大學做了一項調查，結果也大致如此。

AW: 我們最近進行一個上海的项目，發現綠色建築的總成本比原來多出了20%。
KSW: 某些特別的裝置可以很昂貴，但一般其他水準合理甚至更好的結構產品，售價就相宜得多。

AW: 我們已經討論過政府、本地發展商及市場，都是有關引起發展商動機的問題，還有兩個重要的議題未曾提及。首先是相關的研究中心，沒有資源分配給這類的機構，所以沒人提供多元化的創新方案。很常見的問題：有冷氣但沒辦法調節，室內不是冷冰冰就是悶熱得窒息。我們要反轉整個局面，或許重新參考一些古老的智慧再會再幫助，所以我們需要大量的研究支援，帶來創新的概念。

AW: 本地有不少關於空調系統的研究，不過並不是由建築師提出。很遺憾我們的確被邊緣化了，沒有自己的專業小組代表我們爭取大學研究資源的權利。我們被困於法律、土地規劃和人文學科之間。我們沒有自己的小組，只屬於「其他」。記得數年前發出過八百萬補助金，建築只佔其中一項，沒有人覺得這是需要研究的範疇。要作出可持續發展的建議，我們需要社會、經濟、文化等多方面的資料數據。我們希望創造一個負責任的人類居住環境，所以我們的设计要對環境有交代。可惜這個理念只被理解為零溫及通風之類的片面問題。無論建築物可持續與否，我們依然不停興建，如果它們不符合新的可持續要求，最後都還是被拆毀。我們現在可以怎麼做？真的將它們全部拆毀然後重新興建？

AW: 這點點很有啟發。我們不要開始興建節能的大廈，更要想辦法處置舊建築物，拆掉它們也需要成本。我認為應該保留它們，或者加以重新興建。

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DC:除了綠色建築之外，可持續發展也要包括社會及文化層面。Joseph提出引導公眾參與討論，我認為這十分重要。我們要營造一種歸屬感及身份認同，提供一個優良健康的物質生活環境之外，希望人們的精神生活也更加豐盛。我們和大眾可以達成同一陣線，表達我們的關注，讓政府及一眾利益相關者知道怎麼做好他們的責任。

MS:我們的任務是提升認知，讓大眾明白到可持續發展設計的迫切性和效益。更要宣揚一個訊息可持續發展設計就是最好的設計。我們的建築就是最好的印證。

MS:未來無論會出現什麼轉變，我們都需要公眾的支持。9年前我在美國讀書的時候，課堂提到我們將來應該跟客戶共同營造理想環境。今天我當年的同學已經成為深具影響力的政策制定者，例如芝加哥的綠色運動就贏得廣泛的支持，香港方面我覺得應該從小學教育做起，如果課程範圍包括環保及可持續發展，三十年後小朋友們又會成為一批環境決策者！不過那時我們的環境應該已陷於水深火熱。

KSW:我們要發揮正能量，對未來抱著樂觀進取的精神。無論就文化或生態環境而言，我們目前所走的方向是不對的，關鍵在於儘快步回正軌。沒錯，可持續發展課題三十年前已經獲得公眾認識和廣泛討論，每個「綠色」大會的議題、所涉及的字眼甚至要打破的局限都是大同小異。最重要是及時迅速回應，所以關鍵在於改變市場，市場需求就是問題的核心所在。我們要參起直追，刻不容緩。E



Green Alert, Part Two

綠色座談會

Members of the HKIA and AIA Hong Kong got a preview of our sustainability round table at a follow-on panel discussion hosted at the HKIA headquarters. Attendance of the event counted toward the HKIA's Continuing Professional Development programme and the AIA Hong Kong's CES programme.

香港建築師學會及美國建築師學會(香港分會)的會員，當日參與了這個於香港建築師學會總部舉行的座談會，座談會是圓桌會議的延伸活動，屬於香港建築師學會持續專業發展計劃的一部份，亦是美國建築師學會(香港分會)的CES活動之一。

