Distilling, designing, and disseminating for a sustainable future

Pomeroy Studio's commitment to 'distilling, designing, and disseminating' green ideas for the urban habitat will be presented at the upcoming BEX Asia conference, Southeast Asia's premier business platform for the green building and construction industry.

Prof. Jason Pomeroy, the Studio's founding Principal, believes that the conference provides an excellent platform for cross industry discussion to create greener communities for a greener future. He has been invited to speak on the Studio's unique approach to creating green built environments, which they call 'Evidence-Based Interdisciplinary Sustainable Design', or 'E-BISD' for short. His lecture highlights 3 ideas to help sustain the urban habitat, which also represent the 3 particular research avenues that the design and research studio is undertaking: 1) a move towards zero energy development, 2) greening the urban habitat, and 3) a vertical urban theory for the 21st century.

Towards a zero energy development

With the built environment contributing almost 50% of global carbon emissions, steps to kerb climate change have resulted in global protocols to reduce green house gas emissions through legislation, and an increasing advocacy for green design practices to create more sustainable developments. 'Zero energy development' – meaning developments that consume zero net energy and have zero carbon emissions annually can be achieved by ensuring the energy consumed on site is replenished using renewable energy sources (such as wind or solar), while reducing the overall energy consumption by a highly efficient design that is environmentally responsive.

Pomeroy previously collaborated with Malaysia's largest green property developer, Sime Darby, to create and build its prototype 'Idea House' – a project that embraces such ideals, and is the first zero carbon house in Asia. "The Idea House set a benchmark for future tropical living today. It distilled the lessons from the Kampong tradition whilst applying new R and D technologies. The knowledge was then disseminated for the betterment of both industry and the environment. We are fortunate enough to have developed and honed this process in our projects to ensure that designs are not only sustainable, but highly innovative and commercially viable," added Pomeroy.

Greening the urban habitat

The intensive development of cities increases the risk of existing urban greenery being depleted, which unless otherwise retained and / or enhanced, can lead to negative environmental impacts such as temperature rise or increased flood risk. Pomeroy Studio has been researching different types of urban greenery and their installation within the existing city in order to combat such negative environmental effects and improve the social and environmental performance of existing buildings: "Retrofitting urban greenery can be conceived as a giant green lego kit-of-parts that can be clipped into place, with each piece having its own aesthetic, spatial and environmental properties based on the surface area of greenery".

This can be achieved by adapting the Leaf Area Index - a biological parameter which is used to monitor the ecological health of natural ecosystems and to mathematically model and predict metabolic processes. As such, it can be used to quantify the planning and design of urban landscaping in biological terms and ensure a balance of leaf area can be retained on the site for its health and wellbeing, environmental and aesthetic benefits. "Our further research in this field allows us to also understand the properties that greenery brings to the urban habitat, such as temperature reduction, water retention, enhanced thermal performance and noise reduction that can be correlated to particular species, as well as the socio-physiological enhancement of people in and around planting".

#15-92 The Central Office 1
8 Eu Tong Sen Street
Singapore 059818
Co. Reg No: 201205056C

T +65 6592 6827
F +65 6592 6828
www.pomeroystudio.sg

A vertical urban theory

With half the World's population living in increasingly dense urban habitats, space is a commodity in need of preservation and replenishment. According to Pomeroy Studio's research, space and society are intrinsically linked, as one cannot have a discourse about society and the way people interact without also discussing the space in which they can do this. The ability to consider a spatial sustainability as a counter point to social sustainability seems key to the success of high-density vertical urban habitats in the 21st century in order to foster a greater sense of community and thus turn space into place.

Alternative social spaces, such as sky courts and sky gardens, help reduce perceived densities, provide natural light and ventilation, and facilitate opportunities for vertical urban greenery. Collectively, these parameters can create a new forum for social interaction and in so doing reinterpret those urban qualities of the street and the square by lifting them to loftier climbs - for the betterment of society, the urban and natural environment. "Our Studio is a pioneer in the design and research of skycourts and skygardens as alternative social spaces for the 21st century and are currently involved in a study that looks at the correlation between social behavior and the spatial form in skycourts," added Pomeroy.

So, how do these 3 ideas sustain our urban habitat? Pomeroy believes that post-global financial crisis, there has never been a more critical time to account and justify social, economic and environmental actions in the interests of preservation of our natural and urban habitat for future generations. "It is at the juncture of reaching for fact and reason that balances a creative vigour with an academic rigour that our work lies — allowing us to be designers and thought leaders in the field of sustainable design for the built environment in the same instance. This is made possible by a process we call Evidence-Based Interdisciplinary Sustainable Design (E-BISD). It has enabled us to unlock the latent value of spaces in our urban habitat in order to create people centred places, from the micro scale of the dwelling, to the macro scale of the city, that give back to society, the economy, the natural and built environment".

Prof Pomeroy is a guest speaker at the upcoming Bex Asia, Marina Bay Sands, on the 11th October, 2012.

http://www.bex-asia.com/en/Event-Highlights/FOCUS--BEX/

END

For more information, please contact Prof Jason Pomeroy, by phone +65 6592 6828 or email
info@pomeroystudio.sg
www.pomeroystudio.sg