



INFO PACKET: Biophilic SF -- From Biophilic Buildings to Biophilic Cities

Friday, May 13, 12:30-4:30/5pm

Hosts: SF Planning & ARUP SF

For:

- *The Carnegie Mellon University (CMU) and*
- *Singapore Building and Construction Authority (BCA) Academy*
- *Leadership in Environmental Sustainability Executive Development Program*
- *on Big Data & Biophilic Design (May 9-13, 2016)*

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AGENDA

Biophilic Design & Planning Tour & Lunch (12:30-2pm; see back page)

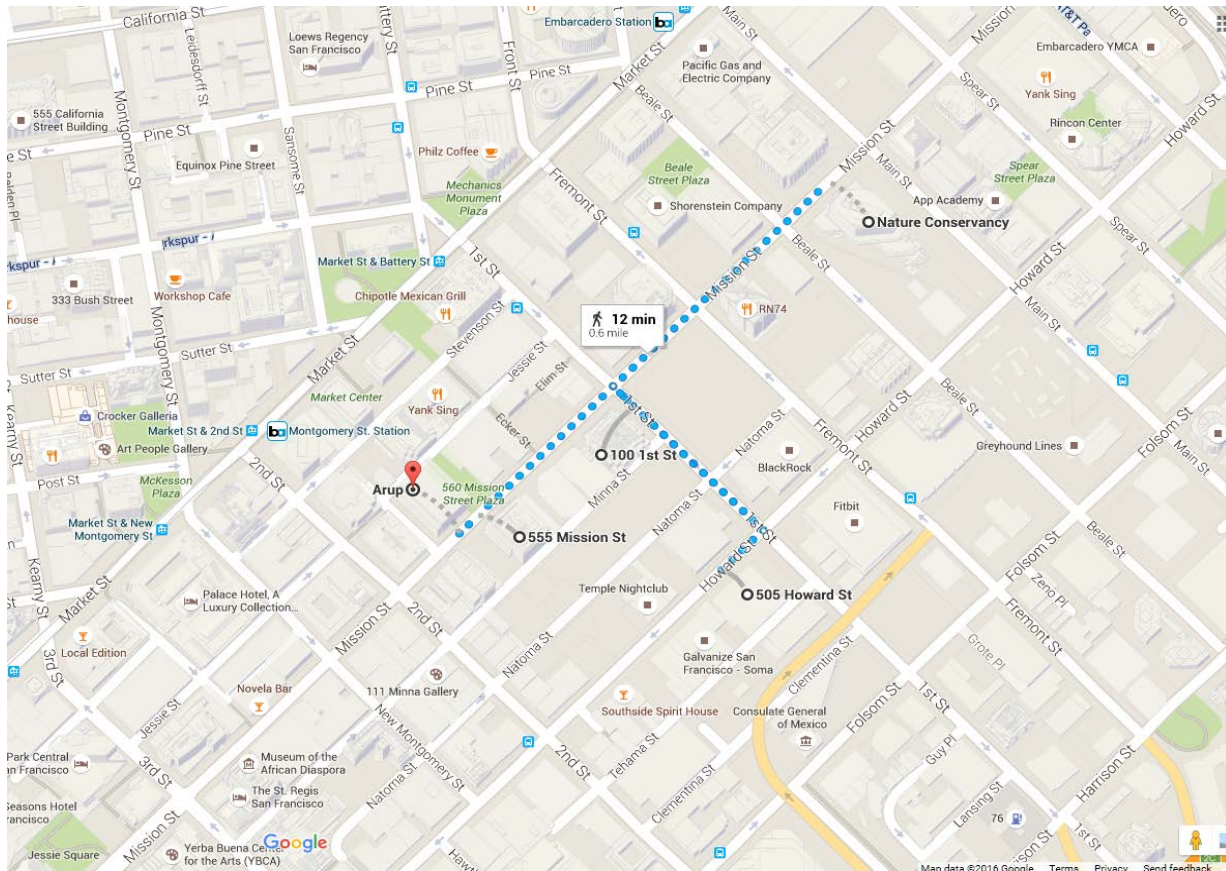
1. **12:00pm:** CMU/BCA Group walks to 100 1st St., gets a takeout lunch along the way (see description for the lunch stop options, one right at 100 1st st Garden (Proper Food))
2. **12:30pm:** **Everyone meets up** at roof garden at 100 First St; bring/eat lunch
3. **1pm:** Walk to the lobby at Building 3 Foundry Square, 505 Howard Street
4. **1:30 pm:** Walk to the Plaza at 555 Mission St
5. **1:45 pm:** Get refreshments, if desired, at adjacent Peets
6. **1:45-2:30 pm:** walk cross the street to the ARUP offices (560 Mission St # 700), get settled

Biophilic SF/City Presentation / Discussion (2:30pm-4:30 pm)

1. Welcome (Scott, 5 mins)
2. CMU/BCA Summary of Program's Key Learnings/Questions, Khee Poh Lam, 5 mins
3. Biophilic City Planning and Network, Professor Timothy Beatley, UV, 30 mins +Discuss.
4. SF's Biodiversity Program & Natural History, Peter Brastow, SFE, 5-10 mins + Discuss.
5. SF's Biophilic City Program, Scott Edmondson, SF Pl./Kirstin Weeks, ARUP, 10+ mins +Discuss.
6. Various SF Initiatives (informal, 5 mins + Discuss) (*tentative*; subject to change)
 - a. Rosey Jencks, Urban Watershed Planning, SF Water (PUC)
 - b. Green Roofs Initiative / Better Roof Ordinance, Anne Brask, SF Pl./Kirstin W. Arup
 - c. Green Walls & the City, Kirstin & colleague
 - d. Opportunities for Biophilia in the Redevelopment Process , Jose Campos, OCII
 - e. Living Alley Program, David Winslow, SF Pl.
7. Optional Reflective Exercise, Kirstin Weeks/Scott Edmondson (4-4:30 pm)
8. Adjourn / Bon Voyage



TOUR MAP (12 mins, 0.6 miles) <https://goo.gl/maps/8oo6SJ9V8Lw>



1. **Morning Session: The Nature Conservancy (TNC) Headquarters (201 Mission Street).** Program participants will hear about their involvement in the biophilic cities movement. They will tour TNC's San Francisco office, a remarkable example of occupant centric planning with deep client involvement in the design process. Results include savings of USD270K in annual operational expenses. In addition, the TNC has reported a rise in daily occupancy due to a carefully considered work environment that embodies the spirit of the organization. The new space allows for seamless interpersonal interaction enabled by the new dedicated collaboration areas.
2. **Take Out Restaurant Options:** (a) Recommendation as easiest/good: Proper Food, street level at stairs going up to the garage rooftop garden at 100 1st street (stairs are off Mission); (2) Portico across the street from 100 1st Street Garden, 98 1st Street @ northwest corner 1st/Mission. On the way to 100 1st St. Garden is Julies Kitchen, 50 Fremont (inside block, walk thru anyway).
3. **100 First St, Roof garden to eat lunch.** Located on the roof of 100 1st Street's parking garage, this public space is chock-full of impressive water features (including a water garden) and sculptured grass areas. It's the perfect place to wind down and enjoy a lunch break.
4. **Foundry Square III (Lobby), 505 Howard Street.** The lobby features two adjoining living walls and two floor-to-ceiling glass walls, allowing passersby to gaze through to the 12,500 plants inhabiting the space. <http://www.habitathorticulture.com/gallery/foundry-square-iii/#1>
5. **The plaza next to 555 Mission Street** stands out thanks to its funky Ugo Rondinone sculptures and lovely green wall. The space also features a towering art installation by Jonathan Borofsky.



PROGRAM DESCRIPTION

The San Francisco / ARUP Session will expand the biophilic focus of the CMU/BCA Program from the building (biophilic design) to the city (planning), exploring both the planning challenge and SF's current initiatives. On a walking tour to our afternoon discussion, we'll visit three buildings with biophilic features, eat a brown bag lunch in one plaza, and arrive at ARUP's downtown offices.

CMU/BCA Building Executive Program Description (from the brochure): The program offers a global overview of the sustainability movement, advocating a holistic approach to address resource management, promoting increasing use of renewable energy sources while minimizing energy consumption and maximizing health and comfort through innovative design and application of advanced building technologies. Focuses for this year's program are on biophilic design and big data analytics.

Biophilia describes the natural affiliation of human beings toward nature and living organisms and its emphasis on the innate connection between humans and other living systems such as plants, animals and the weather. Biophilic design refers to the process of creating good habitat for people as a biological organism in the built environment.

Big Data Analytics in the context of the built environment can be defined as sensing, collection, processing and conveyance of building performance information that is understandable and actionable for data-drive decision making for processes of design, construction and operation of buildings and groups of buildings from campus to urban scales.

References

Biophilic Cities – Integrating Nature into Urban Design & Planning, Timothy Beatley

Blue Urbanism—Exploring Connections between Cities & Oceans, Timothy Beatley

Handbook of Biophilic City Planning & Design, Timothy Beatley

14 Patterns of Biophilic Design – Improving Health & Well-Being in the Built Environment, Terrapin

The Economics of Biophilia – Why Designing with Nature in Mind makes Financial Sense, Terrapin

Biophilia & Healing Environments—Healthy Principles for Designing the Built World, Terrapin

The Value of Ecological Design & the Phoebe Framework, Blog Post, Terrapin, Jake Jones:

<http://www.terrapinbrightgreen.com/blog/2016/03/value-of-ecological-design/>

Foundations and Theory of Terrapin's Framework for an Ecological Built Environment (Phoebe), Blog

Post, Terrapin, <http://www.terrapinbrightgreen.com/blog/2016/02/the-ecological-perspective/#sthash.7dfSiiYP.dpuf>

An Introduction to the Phoebe Framework, Blog Post, Terrapin,

<http://www.terrapinbrightgreen.com/blog/2014/06/phoebe-intro/>

Birthright—People and Nature in the Modern World, Stephen Kellert

The Biophilic Hypothesis, Stephen Kellert and Edward O. Wilson



Biophilic Design—The Theory, Science, and Practice of Bringing Buildings to Life, Stephen Kellert, Judith H. Heerwagen, Martin L. Mador

Living Building Challenge 3.0 – A Visionary Path to a Regenerative Future, International Living Future Institute

Living Community Challenge 1.0 – A Visionary Path to a Regenerative Future, International Living Future Institute

Living Community Patterns—Exploratory Strategies for a Sustainable San Francisco, SF Planning & the International Living Future Institute,

https://www.dropbox.com/s/m4rct0fnfwvr8k5/LivingCommunitiesSanFrancisco_Final_sm.pdf?dl=0

Biophilic Cities Network – Resources: <http://biophiliccities.org/resources/>

Eco-Cities – Rebuilding Cities in Balance with Nature, Richard Register

Urban Ecological Design – A Process for Regenerative Places, Danilo Palazzo & Frederick Steiner

Tapping into Nature – The Future of Energy, Innovation, and Business, Terrapin

Sustainable Urbanism – Urban Design with Nature, Douglas Farr

Green Urbanism – Learning from European Cities, Timothy Beatley

Green Cities of Europe, Timothy Beatley, Editor

Participant List (contact):

From SF

- Timothy Beatley, Teresa Heinz Professor of Sustainable Communities, Founder of the Biophilic Cities Network, U. of Virginia, BCN: <http://biophiliccities.org/>,
- Anne Brask, Green Roofs Planner, SF Planning
- Peter Brastow, Biodiversity Program Manager, SF Environment, (peter.brastow@sfgov.org)
- Jose Campos, Manager of Planning and Design Review, SF OCII (Office of Community Investment and Infrastructure)
- Scott T. Edmondson, AICP, Strategic Urban Sustainability, AICP, SF Planning, (scott.edmondson@sfgov.org)
- Lisa Fisher, Sustainable Planning & Design, SF Planning
- Rosey Jencks, SFPUC
- Mark Palmer, Manager, SF Green Building Program, SF Environment
- David Waldron, Sustainability Professional, Synapse Strategies
- Kirstin Weeks, LEED AP, GRP, CEM, Senior Building Ecology Specialist, Arup (kirstin.weeks@arup.com)
- David Winslow, SF PI (Architect/urban designer).
- Ella Wise, Biophilic Cities Planner, UCB (recent grad)



From CMU/BCA Program

Program Lead

Khee Poh Lam, PhD

Professor of Architecture, School of Architecture

Center for Building Performance & Diagnostics, Margaret Morrison Carnegie Hall 415

Carnegie Mellon University, 5000 Forbes Avenue, MMCH #415

Pittsburgh, PA 15213-3890, USA

(t) 412.268.8503 (e) kpalam@cmu.edu (w:bio) <http://soa.cmu.edu/khee-poh-lam>

Program Assistant

Omer T. KARAGUZEL, PhD

Center for Building Performance and Diagnostics

Carnegie Mellon University

5000 Forbes Avenue, MMCH #415

Pittsburgh, PA 15213, U.S.A.

E-mail: okaraguz@andrew.cmu.edu

Program Participants

List of Participants for CMU-BCA Executive Development Programme (7 - 14 May 2016)					
S/N	Name of Participants	Gender	Name of Company	Designation	Nationality
1	Toh Eng Shyan	M	BCA	Director Green Mark Department (Existing Buildings)	S'porean
2	Stephen Mok Soon Huan	M	BCA	Acting Director (Research Planning and Programmes Department)	S'porean
3	Edward Ang (Dr)	M	BCA	Deputy Director (Green Mark Department (New Development))	S'porean
4	Grace Teo	F	BCA	Senior Lecturer (School of Graduate Development and Management Programme Development)	
5	Chuppan Pannirselvam	M	Singapore Polytechnic	Director (Department of Estates & Development)	S'porean
6	Cheng Seng Jang	M	Singapore Polytechnic	Manager (Department of Estates & Development)	S'porean
7	Lee Yat Cheong	M	Republic Polytechnic	Director (Office of Estates)	S'porean
8	Chen Hong	M	East 9 Architects & Planners Pte Ltd	Office Manager	Chinese
9	Lee Keng Seng	M	SurbanaJurong Consultants Pte Ltd	Director (Quantity Surveying)	S'porean
10	Chong Teck Chin	F	Ngee Ann Polytechnic	Director Estate Management Office	S'porean
11	Alan Thng Tien Chye	M	Ngee Ann Polytechnic	Director Estate Development	S'porean
12	Mui Cheng Hock	M	Ngee Ann Polytechnic	Senior Advisor Estate Development	S'porean
13	Tang Hsiao Ling	F	JTC Corporation	Director (Land Planning Division)	