

A Convenience Truth

a Sustainable Vancouver by 2050

A project of
the School of Architecture and Landscape Architecture
& the School of Community and Regional Planning
of the University of British Columbia



Sustainability by Design project funding partners



Convenience Truth publication funding partners



© 2011 the School of Architecture and Landscape Architecture
and the School of Community and Regional Planning
at the University of British Columbia

All rights reserved. Except for brief reviews, no part of this guide may be reproduced in any form or by any means, electronic or mechanical including photocopying, recording, or by any information storage retrieval system without the written permission of the publisher.

Published by the School of Architecture and Landscape Architecture
and the School of Community and Regional Planning

Room 394A - 2357 Main Mall
Vancouver, British Columbia
Canada V6T 1Z4
patrick.condon@sala.ubc.ca

Edited by Patrick Condon and Scot Hein
Graphic layout and production administration by Lisa Lang
Copy editing and graphic design by Sara Barron

Contributions by James Tuer SALA adjunct faculty, Pat Chan, Jia Cheng,
Rebecca Colter, James Godwin, Cindy Hung, Lisa Lang, Paula Livingstone,
Niall MacRae, Sam Mohamad-Khany, Sara Orchard, Neda Roohnia,
Margaret M. Soulstein, Jingjing Sun, Nicci Theroux, Peiqi Wang,
Tate Francesca White, and Mary Wong.

Edited by Patrick Condon and Scot Hein

Based on research and work resulting from 2010 Urban Studio Class
School of Architecture and Landscape Architecture and School of Community
and Regional Planning

Condon, Patrick M. and Hein, Scot Editors
Includes bibliographical references
ISBN: 978-0-9780966-3-2

1. City Planning - Environmental Aspects - British Columbia - Greater
Vancouver. 2. Sustainable development - British Columbia - Greater Vancouver.
I. Condon, Patrick M. II. Hein, Scot. III. The School of Architecture and Landscape
Architecture. The University of British Columbia. IV. Title. V. Urban Design.

Acknowledgements

On behalf of the 17 students whose work you now hold, we would like to gratefully acknowledge the many people that helped them. First and foremost, we wish to thank our partners who contributed funds for this book. Their interest in this work allowed its dissemination in this form and to a vastly larger audience.

We also acknowledge the longer list of financial partners who have for many years now supported the UBC Design Centre for Sustainability's Sustainability by Design Project. This project could not have been conducted without the wealth of information and project experience provided by the SxD project (sxd.sala.ubc.ca/)

Then we must certainly acknowledge the staff and elected officials of the City of Vancouver, whose interest in our work was truly gratifying. The City provided many of the speakers who provided their time willingly and lavishly to help the students understand the complexities of the city. The grounding they provided helped them produce a vision for the city that is both practical and sustainable.

Also key to the success of this project was the Streetcars the Missing Link symposium, held on September 29, 2010. This symposium, organized by UBC Bombardier Chair Professor Lawrence Frank, galvanized the Streetcar City concept for our students. The ideas expressed there now find physical expression in this design vision.

We would like to thank elementsdb for providing the source for many of the precedents and 3D models used in this book: elementsdb.sala.ubc.ca.

Finally we wish to acknowledge the University of British Columbia, its School of Architecture and Landscape Architecture (SALA) and its School of Community and Regional Planning (SCARP) in particular, for enthusiastically embracing the vision of a school in service to the communities that surround it. We all hope that this small contribution will help illuminate both the challenges and opportunities that confront the City, and the role that UBC students can play in hoisting the lamp.

Patrick Condon, SALA,
James Tuer, SALA,
Scot Hein, SCARP.

Guest Speakers

Richard White
Director, Community Development,
City of North Vancouver

Dr. Larry Frank
Professor and Bombardier Chair,
School of Community and Regional Planning
University of British Columbia

Dave Rudberg
former General Manager,
Vancouver Engineering Department

Tamim Raad,
Director, Strategic Planning and Policy,
TransLink

Kim Stephens
Executive Director,
Partnership for Water Sustainability in BC

Jacqueline Gijssen
Senior Cultural Planner,
City of Vancouver

Dan Garrison
Planner, Housing Centre,
City of Vancouver

Brian Crowe
Assistant City Engineer, Water and Sewers,
City of Vancouver

John Tylee
Director, Policy and Communications,
Vancouver Economic Development
Commission, City of Vancouver

Brent Toderian
Director of Planning,
City of Vancouver



1	History and Morphology of the Vancouver Transit City	4
2	City Form and Energy Use	24
3	City Form and Demographic Shift	36
4	City Form and City Place	48
5	4 Concepts and their Synthesis	64
6	Vancouver Master Plan	74



Back row left to right: Patrick Condon, Niall MacRae, Peqi Wang, Rebecca Coulter, Jingjing Sun, Patrick Chan, James Godwin, Scot Hein, James Tuer
 Front row left to right: Lisa Lang, Margaret Soulstein, Jia Cheng, Cindy Hung, Neda Roohnia, Paula Livingstone, Mary Wong, Nicci Theroux, Sara Orchard, Tate White, Sam Mohamad-Khany

Introduction

You hold in your hands the product of a very intense collaboration. Seventeen students - three planning students from the UBC School of Community and Regional Planning (SCARP) and 14 landscape architecture students from the UBC School of Architecture and Landscape Architecture (SALA) - worked together to produce this 2050 vision for a sustainable Vancouver.

Many people think of Vancouver as North America's most sustainable city. This success can be attributed to valuing high quality urbanism and placemaking while, at the same time, becoming the only city in the world that has accommodated growth while also achieving a reduction in cars entering the city. This recognized success stems from sound policies and implementation rigor. Yet this success derives largely from the redevelopment of industrial lands for housing, with most of these lands confined to the downtown peninsula. With these lands essentially used up, and with a need to protect the city's remaining industrial lands for jobs and more localized economies, and with growth pressures unabated and housing never less affordable, the big question looms: what next?

The urgency of this question has been expressed volubly and frequently at city hall, first within the Clouds of Change Report (1990), and more recently within the Eco-Density Charter (2008) and the Greenest City initiative (2010). All of these related initiatives ask the same question: How can we become a more equitable, more social, more efficient, and more affordable city? Virtually every citizen in the city

agrees that these are worthy goals. Where it gets tricky is when you ask "How can we reach these goals?" It becomes even trickier when you ask "Where can we reach these goals?" This is where this book comes in. In it you will find out how and where we might grow, and what it would look like when the dust cleared.

This city, so famous for its beauty and successes in sustainability, does not have a physical plan to reach its goals. It needs one. Badly. We respectfully offer this vision as a modest step towards its creation.

To ensure that our work is relevant, it is grounded in reality. The reality is that it takes decades to change a city; we assume that it will take us until at least 2050 to make these changes. The reality is that our population, while growing fast, is also growing old; we assume a 250% increase in the number of elderly by 2050, and that housing and serving this cohort will be our biggest challenge. But the ultimate reality is this: we owe it to our grandchildren to reduce our per capita production of greenhouse gases by at least 80%; an entirely electric transit system and a city wide zero carbon district heating system are the means to this end.

And what does it all add up to in human terms? In short, it's a convenience truth. What the students discovered, as they explored the question more deeply each week, was that as the city becomes more efficient, more diverse, more intensely utilized, and a more equitable place to live, it also becomes a more convenient place to live. New more affordable

housing options exist for the young and old. Naturalized recreation networks and "green streets" are brought close to every home. Getting around is easier, cheaper, accessible to all, and carbon free.

Finally, and most importantly, it's affordable. The gradual evolution of the "convenient city" can and should be financed by the gradual growth, conversion and re-conversion of the city itself. The eventual doubling of the number of housing units in the city, and the consequent doubling of job sites and commercial services that must accompany this growth, will generate hundreds of billions of dollars worth of economic activity. Smart and effective partnerships between the private sector and the city will supply the money needed to execute such a vision. The trick lies in how wisely we spend it.

Patrick Condon and Scot Hein Editors

Contributions by:
 James Tuer SALA adjunct professor

SALA Masters in Landscape Architecture Students Jia Cheng, Rebecca Colter, James Godwin, Cindy Hung, Lisa Lang, Paula Livingstone, Niall MacRae, Sara Orchard, Neda Roohnia, Margaret M. Soulstein, Jingjing Sun, Nicci Theroux, Peiqi Wang, and Mary Wong.

SCARP Masters in Planning Students Pat Chan, Sam Mohamad-Khany, and Tate Francesca White.