



Green Development

A. INTRODUCTION

One summer in the mid-1990's 700 people died in Chicago from an extreme hot weather event. In response to this and concerns about climate change the City evaluated the costs of climate change, including increasing temperatures in the City, and found that it amounted to some \$4 to 5 billion per year. The cost derives from a variety of social, economic and environmental problems, including the cracking of building façades, necessity of installing air conditioning in schools, flooding from extreme wet weather, and a potential increase in crime due to rising temperature. The City currently experiences on average five days of extreme hot weather over 38 degrees celsius (100 degrees fahrenheit), which is predicted to increase to over 30 days by the end of the century.

City staff realized that green roofs could help solve a variety of their future sustainability problems. Green roofs absorb rainwater, cool buildings and the ambient air temperature, and create ecology. They also combat the heat island effect that the City suspects increases crime rates. Green buildings, a component of which are green roofs, have decreased employee sick leave by 30 percent in some buildings. With over 371,000 square metres (4 million square feet) of green roofs in the City (and counting), the need for air conditioning and thus energy generated from fossil fuels is decreasing. Sadhu Johnston, the Mayor of Chicago's Chief Environmental Officer, explains, "It is important to look at our infrastructure holistically so that we solve four, five or six problems with each piece. For us it is thinking about how each piece of infrastructure that we install can have multiple functions, including ecological functions."¹

The past decade has seen both a significant increase in urban development, and also an exponential leap in technologies and laws relating to green development. On the one hand, the footprint of urban areas in B.C. has grown by over 150 percent in the past 30 years. On the other hand, the number of certified high performance or green buildings has gone from zero to 950 in North America in the past five years. There is also a significant increase in local government laws that address environmental protection and green development,² and a few provincial initiatives. Spurred on by a host of local to international issues, including the global insurance industry's risk analyses that show how much of the existing built form will

¹ Presentation by Sadhu Johnston, Gaining Ground Sustainable Development Leadership Summit (June 2008) <http://gaininggroundvic.blip.tv/#968023>

² See examples in the Green Bylaws Toolkit www.greenbylaws.ca.

not survive climate change,³ green development appears to be changing how many B.C. communities function.

Green development refers to land and infrastructure development that is premised on functioning ecological systems and built forms that use significantly less energy, water, and other resources than is currently the norm.

Given the increasing attention paid to green development by industry, all levels of government, and communities, the purpose of this background paper is to discuss some of the legal implications of implementing sustainability on a community-wide basis. Section B defines green development using the example of the Dockside Green project in Victoria. Section C canvases the public interest environmental law issues that arise from creating more sustainable communities. Section D invites the reader to consider questions posed in anticipation of the ELC Associates teleconference on Monday April 27 2009.

B. GREEN DEVELOPMENT DEFINED

The Dockside Green project in Victoria is the most sustainable development under construction in B.C. at present.⁴ Formerly a contaminated mill site, the redevelopment of the 6 hectare (15 acre) property in the Inner Harbour across from downtown will result in 121,000 square metres (1.3 million square feet) of mixed use residential, office, commercial and industrial uses. The City of Victoria chose to sell the land to the Dockside Green Limited Partnership based on a triple bottom line rating system. The City gave equal weight to the environmental, social and economic elements of the proposal.

The Dockside Green project incorporates all of the major elements of green development, which include:

Remediation and Restoration

For disturbed sites, remediation and restoration to a level of functioning ecology is expected. This usually involves biodiversity corridors that traverse the site, and a site plan that reflects pre-development ecology to an extent.

³ Association of British Insurers (2007). Insuring Our Future Climate: Thinking for Tomorrow, Today <http://www.abi.org.uk/BookShop/ResearchReports/70747%20ABI%20Climate%20Broch.pdf>; David Suzuki Foundation (for the Real Estate Institute of British Columbia and Real Estate Foundation of B.C. 2007). Hot Properties: How Global Warming Could Transform BC's Real Estate Sector http://www.davidsuzuki.org/files/reports/DSF_HotProperties_final1.pdf; Evan Mills (2009). From Risk to Opportunity 2009: Insurer Responses to Climate Change (Ceres) <http://www.ceres.org/Document.Doc?id=417>.

⁴ For more information see the Dockside Green website http://docksidegreen.com/index.php?option=com_frontpage&Itemid=1. For the legal elements, see Elizabeth Yip (2009). Keeping it Green Through Covenants and Easements (Vancouver: Continuing Legal Education Society of B.C.) and Elizabeth Yip (2009). What Green Development Means for Lawyers: Fifteen Years of Experience from UniverCity and Dockside Green (Vancouver: Continuing Legal Education Society of B.C.).

The Trilogy of High Density, Mixed-Use and Active Transportation

Sustainable land development focuses on higher density mixed-use developments that provide walking and biking infrastructure. Zoning and subdivision standards, and budget decisions about where to spend money for transportation infrastructure, namely on sidewalks and bike lanes, can require adequate densities to support neighbourhood commercial uses and frequent public transit. They also promote active forms of transportation, reduce air pollution and lower the risk of car related accidents.⁵ Smart Growth BC's 2009 Sprawl Report evaluates communities based on their walkability and concludes that community form has a significant impact on physical activity and health.⁶ People living in walkable neighbourhoods walk more and suffer less from a variety of ailments such as hypertension. Higher density attached housing forms are also becoming the norm, particularly in B.C. where the number of multi-unit housing starts increased from half of all new units to two thirds in the past five years. The Canada-wide average has similarly moved to over 50 percent attached housing.⁷ Attached dwelling forms that share a wall can use 30 percent less energy, and attached dwellings in walkable communities can use 66 percent less energy than their suburban counterparts when transportation is taken into account.⁸

Green Buildings

Green development is often solely about high performance or green buildings. The hallmark of green buildings is significantly exceeding the energy and water efficiency standards in the Building Code. A variety of third party green building rating systems exist, the most popular being the Leadership in Energy and Environmental Design (LEED) standard promulgated by the Canada and United States Green Building Councils. Dockside Green has committed to achieving the highest LEED rating (platinum), and will pay up to a \$1 million penalty if it fails to do so.

Energy Production

Carbon neutral or carbon negative developments are only possible if the development generates energy on site. The energy may be for the use of buildings and businesses in the project itself, or may be exported to other facilities or, for electricity, fed back into the grid. The technologies that are being used include solar, wind, geothermal, microhydro and many different micro-electricity generators. Dockside Green is installing a biomass gasification plant that will use wood waste to generate 100 percent of the electricity used on the site.

⁵ Lawrence Frank, Sarah Kavage & Todd Litman (undated). Promoting Public Health Through Smart Growth www.smartgrowth.bc.ca/Portals/0/Downloads/SGBC_Health_Report_FINAL.pdf

⁶ Ray Tomalty and Murtaza Haider (2009). BC Sprawl Report: Walkability and Health www.smartgrowth.bc.ca/Portals/0/Downloads/SGBC-sprawlreport-2009.pdf

⁷ Canada Mortgage and Housing Corporation, Canadian Housing Statistics www03.cmhc-schl.gc.ca/b2c/b2c/init.do?language=en&z_category=0/0000000055

⁸ Sustainability Solutions Group & Holland Barrs Planning Group (2007). The GHG Implications of Different Settlement Patterns on Salt Spring Island (prepared for the Islands Trust). Summary at <http://www.sustainabilitysolutions.ca/downloads/ghgsaltspringsummary.pdf>.

Wastewater Treatment

Green development captures the majority of the water used and falling on the site and reclaims it for reuse in toilets, irrigation, and water features. This requires dual plumbing to bring the reclaimed water back into buildings. Dockside Green has committed to treating 100 percent of wastewater on site so it can be reused for non-potable uses.

Transportation Choices

Through higher density, green development projects provide easy access to transit, and incorporate high quality pedestrian and bicycle infrastructure. Dockside Green will also accommodate several parking spaces for Victoria Car Share Cooperative vehicles, and will run a mini-transit service to downtown.

Community Infrastructure Governance System

Finally, the common green infrastructure is often owned or overseen by a community association or society composed of strata corporations or residents. The intent is that this overall body will ensure that the common infrastructure, such as energy and waste systems, continue to be operated for their green benefits. At Dockside Green the strata corporations and owners comprise the membership of the Dockside Green Society whose mandate is to maintain and repair all the common systems, support the LEED certification, supervise the relationship with the Car Share Cooperative, and own the wastewater treatment plant.

These green development features all implicate law to an extent. Like environmental law, green development law is not its own practice area but incorporates elements of many areas of law, particularly municipal, administrative, real estate, utilities, and corporate law. Section C describes some of the characteristics of the package of legal issues that comprise the legal regime for green development, in particular noting their strengths and weaknesses.

C. ELEMENTS OF GREEN DEVELOPMENT LAW

1. Broad Discretion in the Regulation of Land Use Planning and Development

Municipalities and regional districts have largely the same powers for land use planning and regulating development under Part 26 of the *Local Government Act*. These powers include authority for:⁹

- official community planning (OCPs);¹⁰
- zoning (regulating the use, density or amount, and form of development);
- density bonus (the ability to receive increased density on the site in return for providing public amenities such as greenspace or ecosystem restoration);
- parking;

⁹ *Local Government Act*, R.S.B.C. 1996, c.323 Part 26 (sections 872-946.3).

¹⁰ It is important to note that all subsequent bylaws must be consistent with OCP policies.¹ However, policies do not enable specific action and are not enforceable against a local government unless a court finds that local government action is in direct conflict with the policies. *Local Government Act* s.884(1); *Rogers v. Saanich* (1983), 22 M.P.L.R. 1 (B.C.S.C.) and *Brooks v. Courtenay (City)* (1991), 78 D.L.R. (4th) 662 (B.C.C.A.).

- runoff control, including the maximum percentage of land that can be covered by impermeable surfaces;
- screening and landscaping;
- non-conforming uses;
- development permit areas; and
- development approval information areas or circumstances.

In addition, municipalities may regulate and approve subdivision, and have further regulatory jurisdiction over tree cutting,¹¹ watercourse protection, the use of cosmetic pesticides on residential properties, and alien invasive species.¹²

All of these powers are discretionary. A local government is not compelled to enact any of these land use regulations, which provides for a high degree of flexibility in regulation depending on the ecological, geographic, demographic, political and economic circumstances in which a local government finds itself. This also means that most local governments do not regulate the cutting of the urban forest (trees), nor do they require minimum densities to be met before the approval of proposals for the development of new greenfield sites.

2. Lack of Provincial Standards Leads to Drastic Differences in Local Government Standards

This largely enabling jurisdiction for local governments, absent provincial standards, results in different environmental protection and land use planning regimes for each local government in B.C. For example, the District of Metchosin near Victoria is a rural farm-based community with a minimum lot size of 4 hectares. The adjacent City of Colwood has approved golf courses and subdivisions of single detached homes right up to its borders.

Local government operations also differ dramatically across the province. This past week the City of Dawson Creek pledged to become carbon neutral by 2012 by achieving a 54 percent reduction in emissions from projected 2021 levels.

3. Reliance on Performance-Based Standards

The lack of provincial standards leads to the use of performance-based standards by local governments in development agreements, such as the Docksider Green Master Development Agreement, and in bylaws. Local government create their own standards that they expect developers to meet, such as no net increase in post-development rainwater flows. Local governments also reference third party standards to secure commitments from developers. In particular, local government make reference to the LEED rating systems and best practices guides developed by senior government or non-governmental organizations.¹³

¹¹ *Community Charter*, S.B.C. 2003, c.26 ss. 50-52.

¹² *Community Charter*, s.8(3)(j) and s.9; Spheres of Concurrent Jurisdiction – Environment and Wildlife Regulation B.C. Reg. No. 144/2004.

4. Increasing Use of Charges on Land Title to Secure Long-Term Green Commitments

In an effort to ensure that green development remains green over time, big firm lawyers are registering a maze of covenants, easements, statutory rights of way, priority agreements, rent charges on titles to units. A typical Dockside Green title boasts 21 easements, seven covenants, four priority agreements, four statutory rights of way, and two rent charges. While this approach may ensure future owners live up to some green commitments, it poses significant complexity and cost for monitoring and enforcement. Covenants, in particular, are notoriously ignored by landowners,¹⁴ and the little case law in this area has not yet provided any clarity.¹⁵

5. Limitations on Local Government Environmental Protection Jurisdiction

With a few exceptions, except for those land use and regulatory powers specifically outlined above under section C1, local governments share environmental protection jurisdiction with the provincial government.¹⁶ Concurrent jurisdiction requires that any municipal bylaw dealing with environmental protection outside of those enumerated powers must be approved

¹³ For example, Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia http://www.env.gov.bc.ca/wld/documents/bmp/devwithcare2006/develop_with_care_intro.html; Best Management Practices for Amphibians and Reptiles in Urban and Rural Environments in British Columbia <http://www.env.gov.bc.ca/wld/BMP/herptile/bmpherptile.html>; Best Management Practices for Raptor Conservation During Urban and Rural Land Development in British Columbia http://www.env.gov.bc.ca/wld/documents/bmp/raptor_bmp_final.pdf; Instream Flow Guidelines for British Columbia http://www.env.gov.bc.ca/wld/BMP/instreamflow_wkgdrft.html; Standards and Best Management Practices for Instream Works <http://wlapwww.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf>; Riparian Areas Regulation Assessment Methods http://www.env.gov.bc.ca/habitat/fish_protection_act/riparian/riparian_areas.html; Best Management Practices for Lakeshore Stabilization http://www.env.gov.bc.ca/wld/documents/bmp/BMPLakeshoreStabilization_WorkingDraft.pdf; Environmental Objectives and Best Management Practices for Aggregate Extraction <http://wlapwww.gov.bc.ca/vir/pa/aggregate.pdf>; Stream Stewardship: A Guide for Planners and Developers http://dev.stewardshipcanada.ca/sc_bc/stew_series/NSCbc_stewseries.asp?sProv=bc&siteLoc=scnBC&lang=en#sbg; Access Near Aquatic Areas: A Guide to Sensitive Planning, Design and Management http://dev.stewardshipcanada.ca/sc_bc/stew_series/NSCbc_stewseries.asp?sProv=bc&siteLoc=scnBC&lang=en#access; Stormwater Planning: A Guidebook for British Columbia <http://www.env.gov.bc.ca/epd/epdpa/mpp/stormwater/stormwater.html>; and Community Green Ways Linking Communities to Country and People to Nature http://dev.stewardshipcanada.ca/sc_bc/stew_series/NSCbc_stewseries.asp?sProv=bc&siteLoc=scnBC&lang=en#cg.

¹⁴ S. D. Inglis, P. A. Thomas, E. Child (1995) Protection of Aquatic and Riparian Habitat on Private Land: Evaluating the Effectiveness of Covenants in the City of Surrey, 1995 <http://www.dfo-mpo.gc.ca/Library/224985.pdf>

¹⁵ Case law includes *Suomalainen v. Jernigan*, 2004 BCSC 465, 8 C.E.L.R. (3d) 176 where one neighbour sued another over the construction of a hot tub gazebo in contravention of viewscape and setbacks contained in a statutory building scheme.

¹⁶ *Local Government Act* s.693.1(2). Concurrent jurisdiction or authority is found in s.9 of the *Community Charter*, S.B.C. 2003, c.26.

by the Minister, enacted under a regulation, or enabled by agreement between a local government and a provincial Ministry. Regional Districts do not have this additional environmental protection opportunity.

A recent and somewhat inexplicable application of this concurrent jurisdiction authority, which also applies to building regulation, is found in an analysis of Bill 10, the *Housing Statutes Amendment Act, 2008*. Bill 10 augments jurisdiction for buildings by allowing local governments to enact bylaws regulating buildings for the purposes of:¹⁷

- The provision of access to a building or other structure, or to part of a building or other structure, for a person with disabilities;
- The conservation of energy or water; and
- The reduction of greenhouse gas emissions.

It is important to note that this authority is subject to the Community Charter's concurrent jurisdiction section.

Under concurrent jurisdiction, the Buildings and Other Structures Bylaws Regulation provides authority for local governments to regulate buildings.¹⁸ It allows local governments to regulate buildings by bylaws that establish standards for the construction, alteration, repair or demolition of buildings or structures that:

- Are listed in sentence 1.1.1.1 (2) of Division A of the Code [structures to which the Code does not apply such as public infrastructure located in a street, utility towers, hydro electric dams and accessory buildings less than 10 square metres], or
- Are not "buildings" as defined in the Code.

For buildings or structures not referred to above, a council may adopt a bylaw that establishes standards for construction, alteration, repair or demolition of a building or structure subject to the restrictions that the bylaw must not (emphasis added):

- Establish standards *that are additional to or different from* the standards established by the Code,
- Extend or change the application of scope of the code as specified in articles 1.3.2.1 [the application of the Parts 1, 2, and 3 of Division A of the Code to all buildings covered by the Code], 1.3.3.1 [the application of Parts 1, 7, and 8 of Division B of the Code to all buildings covered by the Code], 1.3.3.2 or 1.3.3.3 [the application of specific part of the Codes to different types of buildings] of Division A or subsection 2.2.7 [professional design and review] of Division C of the Code, or
- Change the form of a letter that is set out in a schedule to subsection 2.2.7 [professional design and review] of Division C of the Code.

Therefore, for most buildings any local government bylaw purporting to regulate buildings cannot establish standards that are additional to or different from the standards established

¹⁷ At section 6, amending *Local Government Act* s.694.

¹⁸ BC Reg 86/2004.

by the Building Code. This is important where a local government wants to require a particular energy efficiency standard that can be met without supplementing the Code. Under the Buildings and Other Structures Bylaws Regulation, a building bylaw cannot set standards that are different from the Code.

6. Push of Provincial Climate Change Legislation

Local governments are clearly feeling the push of the provincial government's suite of climate change legislation.¹⁹ Where very little of it to date affects local governments, they have the sense that there will be legislation in the near future that, for example, requires them to become carbon neutral in their operations. New provisions under Bill 27 (2008) require local governments to include targets and actions to achieve those targets for the reduction of greenhouse gas emissions in their official community plans.²⁰ As noted above, all subsequent bylaws must be consistent with these targets, however they are not enforceable against a local government unless a court finds that local government action is in direct conflict with the targets.²¹

Examples of targets and actions could include:

- Target: 100 percent of new municipal buildings will conform with an energy efficiency standard of 25 percent below Model National Energy Code for Buildings. Action: Implement a green facilities policy.
- Target: The municipality will decrease GHG emissions from operations by 30 percent by 2010. Action: Implement a green operations policy for evaluating and decreasing the GHG impacts of capital works projects; decrease staff and councillor travel by 20 percent through the use of teleconferencing and videoconferencing, etc.
- Target: 60 percent of new development will occur within existing urban areas. Action: Revise zoning and OCP policies about servicing to support the urban containment boundary.

¹⁹ The provincial government enacted a suite of legislation in 2007 and 2008 to address climate change through the reduction of greenhouse gas emissions. These acts include:

- *Greenhouse Gas Reduction Targets Act*, S.B.C. 2007, c.42 that sets province-wide targets for reducing greenhouse gas emissions;
- *Carbon Tax Act*, S.B.C. 2008, c.40 establishing a carbon tax;
- *Greenhouse Gas Reduction (Vehicle Emissions Standards) Act*, S.B.C. 2008, c.21 reducing tailpipe emission of greenhouse gases for certain vehicle;
- *Greenhouse Gas Reduction (Emissions Standards) Statutes Amendment Act*, 2008, S.B.C. 2008, c.20 reducing greenhouse gas emissions from certain industrial operations;
- *Greenhouse Gas Reduction (Cap and Trade) Act*, S.B.C. 2008, c.32 enables B.C. to participate in a cap and trade system through the Western Climate Initiative;
- *Housing Statutes Amendment Act*, S.B.C. 2008, c.8 and *Local Government (Green Communities) Statutes Amendment Act*, S.B.C. 2008, c.23 enabling local governments to take further action on establishing land use and building regulations to reduce greenhouse gas emissions.

²⁰ At section 20, amending *Local Government Act* s.877.

²¹ *Local Government Act*, s.884; *Rogers v. Saanich* (1983), 22 M.P.L.R. 1 (B.C.S.C.) and *Brooks v. Courtenay (City)* (1991), 78 D.L.R. (4th) 662 (B.C.C.A.).

- Target: Increase tree cover by 10 percent by 2012. Action: Enact landscaping standards as part of development permit areas.

D. DISCUSSION

The good news is that there is some evidence that local governments are becoming more sophisticated in their dedication to community plans and evaluation of proposed green development. An example of such leadership was shown by Hope Burns, the Director of Planning for the District of Central Saanich, a small rural municipality north of Victoria and the Planning Institute of B.C.'s 2008 Planner of the Year award recipient.²² The District received an application to amend its official community plan and the regional growth strategy to accommodate several hundred new housing units on top of a hill. The proposal involved rural land and transferring land into and out of the Agricultural Land Reserve. It incorporated a variety of green features such as permeable paving, stormwater infiltration, clustering buildings, a trail, green roofs and green building certification. Ms. Burns' Report to Council clearly outlined the primary question of whether the site was appropriate for intensive residential development, contrary to the community plan. Council chose to uphold the community plan. This is one example of a local government acknowledging that a certified green building in the middle of a corn field is not sustainability in action.

This paper is a modest attempt to identify some of the issues associated with greening communities in B.C. To that end, we invite Associates to consider the following questions at our next teleconference on Monday April 27 from 4pm to 6pm:

1. Lack of Provincial Standards

Aside from the riparian assessment process and some Building Code standards, there are no provincial standards mandating that development ensure continued ecological function. The provincial government took the first step in "greening" the B.C. Building Code in the fall of 2008 that resulted in modest gains such as mandating maximum six litre toilets and low flow showerheads.²³ There were minimal improvements in energy efficiency in building, however these requirements do not reach any of the popular green building rating standards nor the federal government's Energuide 80 standard.

In the 1970's the state of Oregon enacted state-wide land use regulations requiring the dedication of urban growth boundaries around all urban areas. Oregon's 40 years of experience with this regime has resulted in significantly more concentrated development patterns than in other states, protecting the working landscape for forestry and agriculture.

²² Report to council re: 8410 Wallace Drive (Ian Vantreight, Vantreight Farms) dated January 9th 2008 on file with author.

²³ Ministry of Housing, Housing and Construction Standards, Greening the BC Building Code: First Steps <http://www.housing.gov.bc.ca/building/green/>.

Would provincially mandated density targets, urban growth boundaries, minimum ecological function, and percentage of the landscape in biodiversity corridors ensure that the environment remained healthy in the face of urban and rural growth? Is this approach feasible in B.C. where local governments have almost sole authority for land development on private land? Does it matter, given that 95 percent of B.C. is Crown land?

2. Enforcement Challenges

Given that the title to a typical unit at the Dockside Green project in Victoria has 38 charges, most of them relating to the green features of the development, what is the likelihood of success in (a) monitoring and (b) enforcing those covenants and other charges?

3. Reserve and Treaty Settlement Lands as the Next Subdivision

Many local governments view adjacent reserve or treaty settlement lands as an opportunity for the next typical low-density subdivision. How can public interest environmental lawyers and lawyers who practice aboriginal law address this concern?

4. Duties of Lawyers

Is there a case to be made that lawyers have a duty to disclose emerging environmental liabilities such as proximity to sea level rise or construction on slopes of a certain grade given the impact of extreme weather events? This question is similar to whether lawyers have a duty to discuss potential aboriginal rights and title issues when dealing with land.

For More Information:

Legislation and Regulations

Local Government Act, R.S.B.C. 1996 c.323 Part 26 Planning & Land Use

http://www.bclaws.ca/Recon/document/freeside/--%20%20--/local%20government%20act%20%20rsbc%201996%20%20c.%20323/00_act/96323_28.xml#FOUND-NOTHING

Articles

Elizabeth Yip (2009). Keeping it Green Through Covenants and Easements (Vancouver: Continuing Legal Education Society of B.C.).

Elizabeth Yip (2009). What Green Development Means for Lawyers: Fifteen Years of Experience from UniverCity and Dockside Green (Vancouver: Continuing Legal Education Society of B.C.).

Reports

Energy Efficiency and Buildings: A Resource for BC Local Governments

<http://www.communityenergy.bc.ca/sites/default/files/EnergyEfficiencyOnlineGuide2009.pdf>

Green Bylaws Toolkit www.greenbylaws.bc.ca

The Green Buildings Guide: Tools for Local Governments to Promote Site Sustainability
<http://www.wcel.org/wcelpub/2006/14252.pdf>

The Green Infrastructure Guide <http://www.wcel.org/wcelpub/2007/14255.pdf>

Web Sites

Smart Bylaws Guide www.wcel.org/issues/urban/sbg

Smart Growth BC www.smartgrowth.bc.ca