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Evaluating Riparian Strips for Sustainability In British Columbia: Possess these shores with me

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by

Mark Robert Merner

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UNIVERSITY OF CALGARY

Evaluating Riparian Strips for Sustainability in British Columbia:

Possess these shores with me

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A THESIS

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ABSTRACT

How effective are strips at sustaining riparian environment in British Columbia? Riparian strips are parcels of land that abut water. Sustainability means providing public access to and along watercourses for recreation, minimizing economic losses due to flooding, and ensuring the conservation of habitat. Strips are created through reservation, restriction, or dedication, upon Crown grant, subdivision, or development.

Methodology included reviewing provincial legislation and policy and eight case studies – Monashee, Dean River, Comox, Nanaimo, North Vancouver, Sooke, Victoria, and West Vancouver.

Findings are that Crown grants exclude land within 100 m of watercourses. Dedication is most effective upon subdivision because it gives municipalities great control over property. Zoning bylaws, statutory rights of way and restrictive covenants are used upon development. Riparian strips are not effective at sustaining riparian environments except when continuous public access to the water is lost. Riparian strips should have a 5 m minimum width, and access ways should be elevated with railings.

Acknowledgements

Maggie, who encouraged, cajoled, and badgered… but most of all believed

Brian, who led the way and made sure that I followed

P.B. and J.P. who taught me to never stop laughing and learning. Both gone but not forgotten.

And finally, the Engineering for the Environment Program for providing funding to assist in this research.

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EPIGRAPHS

Come, worthy Greek! Ulysses, come;
Possess these shores with me!
The winds and seas are troublesome
And here we may be free.

Samuel Daniel, *Ulysses and the Siren*, 1

'So – this – is – a – river!'

'*The* River,' corrected the Rat.

'And you really live by the river? What a jolly life!'

'By it and with it and on it and in it,' said the Rat. '… It's my world and I don't want any other … whether in winter or summer, spring or autumn, it's always got its fun and its excitements. When the floods are on in February, and my cellars and basement are brimming with drink that's no good to me, and the brown water runs by my best bedroom window, or again when it all drops away and, shows patches of mud that smells like plum-cake…'

'But isn't it a bit dull at times?' the Mole ventured to ask. 'Just you and the river, and no one else to pass the time with?'

'No one else to – well, I mustn't be hard on you,' said the Rat with forbearance. 'You're new to it, and of course you don't know. The bank is so crowded nowadays that many people are moving away altogether…'

Kenneth Grahame, *The Wind in the Willows*

He turned his attention to his left as he walked slowly along [the towpath], noting once more the authoritative notices posted regularly along the low, neat terrace: 'No mooring opposite these cottages.' The people here were obviously jealous of their acquired territories – doubtless rich enough, too, to own boats of their own and to regard it as some divine right that they should moor such craft immediate opposite their neatly-painted porches.

Colin Dexter, *The Riddle of the Third Mile*

I. CONTEXT

This introduction serves two functions. It introduces the research questions, and it outlines the methodology of the thesis with an overview of what each of the chapters addresses.

Public interest in riparian land is high and public rights to and along bodies of water is a topical question. Riparian land may serve several purposes. It may be used for public recreation, through the creation of public walkways such as along the Seawall in Stanley Park, Vancouver. Economic concerns may require restrictions on activity in these areas as more development in floodplains can expose such projects to potential damage.[1] Finally, providing access within and developing riparian areas may cause potential harm to the environment, such as to sensitive fish habitat, exhibiting a need for conservation.[2] The creation of riparian strips may then serve the purpose of sustaining riparian habitats, whether for public accessibility, economic, or conservation reasons.

Yet, if sustainability is to be defined as the achievement of each of these purposes, there is potential for conflict. Can one have pedestrian access to a waterway that is known fish habitat and still meet the criterion of conservation? More directly then, the crux of this thesis will be to determine to what extent riparian strips promote sustainability in British Columbia.

Background

Riparian land refers to those parcels of real property that are bounded on some portion by a river, lake or ocean. In its strict sense, the term littoral should be used when referring to land that has an ocean or lake boundary, with the term riparian reserved for land along rivers. However, the use of riparian to describe all land bound by water has become generally accepted. [3]

Riparian boundaries are easily recognized and are among the oldest forms of territorial definition. In establishing the land of Canaan, Moses was told that the Great Sea “will be your western boundary.” [4] Yet, the ease with which these boundaries are recognized also yields some difficulties due to the dynamic nature of the interface between land and

water. Fluctuating water body levels and the potential for accretion and erosion each hinder the precision with which boundaries may be ascertained. Therefore, unlike fixed boundaries that are one dimensional along their length, riparian boundaries require consideration of a second dimension – time. [5]

In British Columbia, a riparian boundary is legally referred to as a natural boundary and is defined as being located at the "visible high water mark." [6] The courts have interpreted such a boundary to be at mean high water mark (MHWM) for tidal waters, [7] at the ordinary high water mark (OHWM) for rivers, [8] and at the water's edge for lakes. [9]

Despite the legal definitions of a natural boundary, it may be unclear to a landowner as to where their upland parcel ends and the body of water begins. More precisely, an apparent riparian parcel may not be riparian at all, as an intervening strip of land may exist between the upland parcel and the water. Whether the strip of land along the natural boundary is a portion of the upland parcel or a distinct parcel, it is the nature of this riparian strip that is the focus of this discussion. Several questions arise. If a riparian strip exists, how was it created – what was the **mechanism**? What was the specific event that allowed it to be created – what was the **trigger**? And finally, what was the reason for creating the strip – what was its **purpose**?

Another issue that may confuse riparian owners is what rights – both available to land owners and to the public – are associated with their parcel. At common law, riparian land has certain private rights attach to it that include permission to protect the upland from erosion, the continued quantity and quality of surface water flow, ownership of any naturally accreted land, and access to and from the water along the common or natural boundary. Erosion prevention measures such as building embankments, dyking and other protective works are permitted, as long as the works are completed on the riparian parcel above the natural boundary. However, the right to the use of a quantity of surface water has been abrogated by the institution of a water-licencing system via the *Water Act*. [10] The system retains the water quality right to some extent, as licenced users must ensure that water quality is maintained for downstream users. The right to any land that accretes in a slow, gradual and imperceptible manner to a riparian parcel is also still valid within the province. Finally, the private right of unimpeded access to and from a riparian parcel

remains applicable to both navigable and non-navigable bodies of water in British Columbia. This right applies to all points along the water frontage. [11] These rights are known collectively as riparian rights and serve the private interests of the upland riparian owner.

However, the focus of this thesis is in serving the public interest in riparian land by conserving habitat, preventing economic loss and providing public access to riparian strips. At common law, riparian land is not subject to any such public right in British Columbia. Yet, if riparian strips are to be created for sustainability purposes, then public rights in riparian land have been or will need to be created in order for the public to "possess these shores" and satisfy these needs.

Methodology

The concept of sustainability in terms of riparian strips is examined in chapter two. The role of regulators, the public policies adopted, and models and mechanisms for sustaining a riparian environment are discussed through a review of the literature.

In choosing a strategy for assessing the effectiveness of riparian strips in achieving sustainability, it is important to ensure the goal of the research can be achieved. Yin has identified three conditions to be considered in choosing a research strategy: i) the type of research question posed; ii) the extent of control an investigator has over events; and iii) the degree of focus on contemporary versus historical events. [12]

As this thesis is concerned with the extent to which riparian strips promote sustainability, and more particularly how and why riparian strips are created in British Columbia, this research is concerned with contemporary issues where little control of events is available to the researcher. The use of a case study approach is an effective technique given these constraints, because it follows a replication logic rather than a sampling logic. The method supports the extrapolation to theory from results, rather than generating frequencies of a particular event's occurrence. In other words, it is important to determine whether the riparian strips established are meeting the purposes for which they were created, rather than answering how many riparian strips actually exist. Two types of replication may occur in a multiple case study approach. First, a case may predict

similar results providing literal replication. Conversely, a case may produce contrasting results, but for predictable reasons and this provides theoretical replication.

Eight case study sites are used (Figure 1). The two Crown grant studies were found through a court decision [13] regarding an accretion to a reservation strip (Monashee) and as a result of research into Crown land policy regarding the reservation of riparian strips within the archives at the Crown Lands Branch in Victoria (Dean River).

Figure 1 - Case Study Locations

To assess the use of riparian strips within municipalities, an initial questionnaire was sent to each of the 27 municipalities with a population in excess of 20,000 people and 12 of the smaller municipalities. Only 15 % (6 of 39) of the questionnaires were returned. Due to the poor response, reconnaissance visits were chosen as the means to determine the municipal case study locations.

Several sites were immediately chosen due to prior knowledge of riparian strip use. These were Comox where a court case [14] had resulted from a riparian strip dedication being contested upon a subdivision of property; North Vancouver where a riparian strip was noted from work associated with the Vancouver Port Authority; and Sooke where a court case [15] had resulted from a floodplain setback infringement. In addition to these three locations, interviews were completed with Abbotsford, Campbell River, Kamloops, Kelowna, Nanaimo, Victoria and West Vancouver to allow for adequate representation of population centres within the Greater Vancouver Regional District, the Capital Regional District and the remainder of the province.

From these ten sites, the six municipalities used were chosen as a result of the availability of a suitable case study located within the municipality and the redundant overlap of purposes noted in two of the studies. Campbell River and Kamloops did not have suitable sites, while Abbotsford and Kelowna both had suitable locations but with criteria adequately represented by the remaining sites.

The eight case studies provide coverage for each purpose, trigger and mechanism identified through the literature and preliminary investigations. The eight studies have been divided along the triggers which create riparian strips: i) the grant of land from the Crown, ii) the subdivision or transfer of land, and iii) the development or use of land. The trigger was chosen for categorizing as it allows discussion of the entire process of riparian strip creation in a logical manner within each chapter.

Land may be held either publicly or privately in British Columbia. In order for title to land to be held privately, it must have been previously granted by the Crown. The third chapter of this thesis investigates how riparian strips were or may be created and held upon Crown grant. Two case studies are examined, one on the west coast of Vancouver Island (Monashee) and the other located in West Chilcotin (Dean River), that illustrate the operation of provincial legislation and policy regarding riparian areas.

The fourth chapter explores how the subdivision and transfer of land in British Columbia is used to establish riparian strips. Specifically, it focuses on the provincial legislation that provides for subdivision and transfer of private land and the subsequent subordinate legislation that is used to achieve the purposes identified for sustainability. Three case studies, one each in the City of Nanaimo and the Districts of North and West Vancouver, are used to assess the methods adopted for achieving conservation of the environment, preventing economic loss, and providing access to waterfront areas.

The fifth chapter examines the development process as a trigger in dealing with riparian strips. As with the subdivision process, it focuses first on the provincial legislation that provides for the development and use of land; and then considers the subsequent subordinate legislation. Case studies in the Town of Comox, the Electoral Area of Sooke

and the City of Victoria will be used in order to determine if the adopted methods achieved the various identified purposes.

The final chapter is a synthesis of the mechanisms, triggers and purposes in an assessment of whether riparian strips are effective in the promotion of sustainability. The effectiveness is analyzed based on the case studies, the purposes and the potential for tension and conflict between the purposes. It addresses how and why riparian strips have been used, assesses whether the results have met with intentions and how best to sustain riparian areas with all three objectives concurrently. It concludes with areas for future work and recommendations.

There is one final point. The bulk of the research for this thesis was conducted over the period May 1998 to December 2000. Since December 2000, the Streamside Protection Regulation under the *Fish Protection Act* [16] was endorsed. This document is dealt with only cursorily within the thesis and is addressed as an area for future work.

References:

[1] British Columbia. 2000a. *Flood Hazard Management in British Columbia*. Ministry of Environment, Lands and Parks Brochure. Historically, urban growth has occurred in low-lying floodplains in British Columbia as these were the only flat areas available for development. As a result, many communities have experienced significant flood damage.

[2] British Columbia. 2000b. *Environmental Trends in British Columbia 2000*. Ministry of Environment, Lands and Parks. State of the Environment Reporting. Fifteen percent of the streams in the lower Fraser Valley have been lost and an additional 71% are threatened by industrial and residential development.

[3] Nichols, Susan. 1989. Water Boundaries – Coastal. In: *Survey Law in Canada*. Carswell Co. Ltd. p.187.

[4] *Jerusalem Bible*. 1968. Double Day Company & Inc. New York. Numbers 34:6

[5] Cole, George M. 1997. *Water Boundaries*. John Wiley and Sons, Inc. New York. p.xi.

[6] *Land Act* R.S.B.C. 1996. Chapter 245. s. 1

[7] *Esquimalt and Nanaimo Railway v Treat* [1919-v3] WWR 356

[8] *Dunstan et al. v Hells Gate Enterprises Ltd et al*. (1985), 22 DLR (4th) 568

[9] *Kennedy v. Husband* [1923] 1 D.L.R. 1069

[10] R.S.B.C. 1996. Chapter 483.

[11] Note 3. pp. 186-9.

[12] Yin, Robert K. 1994. *Case Study Research: Design and Methods* 2nd Ed. (Thousand Oaks, California: Sage Publications, c1994) p. 4.

[13] *Monashee Enterprises Ltd v. Minister of Recreation and Conservation (B.C.)*, (1981) 21 R.P.R. 184 (B.C.C.A.)

[14] *Burns v. Comox (Town) Approving Officer* (1997), 45 M.P.L.R. (2d) 104.

[15] *Capital (Regional District) v. Smith* (1998), 49 M.P.L.R. (2d) 159 (B.C.C.A.)

[16] S.B.C. 1997. c.21.

II. SUSTAINABILITY

There is much written in the literature concerning the dependence placed on government to ensure maintenance and protection of the environment. A range of private and public approaches is necessary to effectively manage and protect land and natural resources. [1] The failure of a market economy to consider environmental goods leads to the arguments that governments should look after the environment. [2] In Canada, just which level of government has jurisdiction over the environment has warranted attention as well, due to the overlapping federal/provincial authority interpreted from the Constitution. [3] The common thread in each of these assertions is the notion that government has a role to play in matters that deal with the sustainability of the environment.

In examining the promotion of sustainability through the creation of riparian strips, the desire to have public access to and along water, the potential economic drawbacks from building in floodplain areas, and the need to conserve natural areas can each be established as a public good or in the public's interest. The public trust doctrine would be one means for the Province to provide these public goods.

The public trust doctrine has its roots in common law property rights and has found great favour in protecting natural resources in the United States. The traditional values embraced by the public trust are those of fishing and navigation. The United States has expanded on the doctrine to preserving the public's right of access and use of the public waters and includes ensuring that the environment is not degraded in any manner that would infringe upon these rights. [4]

In Canada, the core values of navigation and fishing have become regulated with the enactment of legislation in the *Navigable Waters Protection Act* [5] and the *Fisheries Act*.[6] While the regulation of fisheries has infringed on the public right of access to the resource, it can be viewed as for the public good to ensure the resource is maintained. Similarly, the Province could embrace the expanded principles of the public trust as done in the United States to preserve the environment. By enacting legislation that required the Province, as trustee, to manage public resources for future generations, it could provide additional legal protection for biodiversity in the province by imposing trust

obligations on the government and by giving the public the legal remedies to protect that trust. Legislatures in Ontario, Northwest Territories, and the Yukon have passed environmental legislation that incorporates the public trust doctrine. [7] However, British Columbia has not adopted the doctrine in its environmental legislation and the few attempts to get the Canadian courts to expand the concept of the doctrine have failed [8] meaning the principles are not currently available to protect a public interest in riparian strips within the province.

Environment as used so far has referred to our natural surroundings. Since the focus of this thesis is on riparian strips in particular, the discussion of environment is limited to this scope. Nothing is lost in narrowing to this viewpoint. Even so, it is necessary to establish why there may be a role for the government with respect to sustainability of riparian strips.

Sustainability of Riparian Strips

The concept most closely identified with the sustainability of the environment is that of 'sustainable development.' The World Commission on Environment and Development (WCED) in 1987 defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." [9] It has been argued that the WCED definition is too sweeping and lacks true meaning as they "never tell us what sustainable development is, by the way, besides an oxymoron." [10] The question lies within the literal meaning of its constituent words. How can one 'sustain' indefinitely 'development' in a finite world? If one limits oneself to such a narrow literal meaning, then it is fairly simple to dismiss the concept. A finite resource cannot be endlessly sustained if it is to be developed.

Yet, the intent of the WCED was meant to be far reaching. Sustainable development was defined in broad terms to provide for discussion of many issues including an increasing world population, providing food for that population, the conservation of species and ecosystems, and the urbanization of rural areas. The WCED identified these issues with respect to an ideal – providing for future generations. It must be recognized that such an

ideal is to be pursued, and not necessarily with the particular expectation that it will be reached.

A more pertinent argument with the WCED definition comes from Sachs who states that unfortunately, the definition calls for the conservation of economic development, not the conservation of nature:

> After all, the development discourse is deeply imbued with Western certainties like progress, growth, market integration, consumption, and universal needs, all notions that are part of the problem, not of the solution. [11]

However, this does give a starting point for discussion. The WCED has contributed to the consensus that we must move to sustainable development but acknowledges that the path is not clear. [12] The way is littered with definitions, as exhibited by Pearce who lists no less than 24 definitions. [13]

Manning offers a definition that refers to land directly:

> Sustainable development is defined as the maintenance of the environmental resource base to sustain those functions which maintain life and socioeconomic activity. In terms of land, this objective could be defined as the maintenance of an adequate quantity of land with required qualities to support, indefinitely, the full range of societal demands which depend on the territorial resource base. These functions could include not only the productive functions of the environment but also the support of special aesthetic values… [14]

This context accepts that there is more to the concept than ensuring productivity. Through this definition, the land resource must be considered for aesthetic qualities as well, such as the recreational or tourism needs of present and future generations.

To achieve this goal, Rees offers the additional insights that government intervention is required but only in conjunction with the leadership and cooperation of the private sector; and that the cooperation occurs across all relevant levels of government. [15] Moffet and Bregha expand on this with a core principle that environmental stewardship – that each individual's actions have significance and therefore have a contributing role to play – by all levels of decision-makers is required. [16] Each argues for a partnership approach to caring for our environment. Government must work on behalf of the public in establishing policy and law respecting the environment; and individuals and the private

sector must recognize that their actions have environmental, economic and social significance.

There are those that disagree with government intervention. Brubaker is a proponent for common law property rights, especially respecting environmental protection. In Canada, we use the courts to assert our property rights, but these rights can be abrogated with the passing of legislation. She views government regulation as causing damage to the environment:

> People had such terribly strong property rights in our history and used them time and again to clean up our rivers, for example, … and governments continually intervened to lessen people's rights. A government's laws and regulations override the common law. [17]

With common law property rights intact, Brubaker's argument suggests that destruction of riparian habitat would be lessened. The property rights system allows the seeking of an injunction and restitution through the courts, and Brubaker implies that people would be more cautious in their activities if government had not intervened. Regardless, the trend for government to assume a greater role in environmental issues continues to be the norm as implied by the increasing importance of local governments in British Columbia in environmental regulation. [18]

The public response to the WCED's call for sustainable development was set out in *Canada's Green Plan* in 1990. The Government of Canada, through a multi-phase consultation process involving Canadians from across the country, set a national objective "to secure for Canadians and future generations a safe and healthy environment, and a sound and prosperous economy." [19] The plan acknowledged that respect for nature requires each of us to accept our responsibility as its stewards. Capacity for exploitation of the environment is not infinite. Beach and fisheries closures, though particulars are not given, are offered as indicators that the environment is becoming over-stressed as habitat destruction occurs. [20]

Government, acting as trustee of the environment on behalf of the people, is responsible for the control of access to the environment through the setting of a framework of laws and regulations. There are three aspects to such interaction in sustainable development

terms and these are environmental, economic and social in nature. [21] These terms can be further refined with respect to interaction with riparian strips.

The first term – environmental – deals with the **conservation** of riparian habitat and is referred to in this manner to avoid confusion with the general concept of the environment. The *Fisheries Act* administered by the Department of Fisheries and Oceans (DFO) provides for the specific conservation and protection of fish and fish habitat. It defines fish habitat in section 34(1) as "spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes." The habitat is not restricted to just the waters, as the riparian area can affect factors such as water clarity and temperature. The requirement to protect fish habitat follows in section 35(1) that states "no person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat."

Yet, in the past the courts have interpreted what constitutes fish habitat. The British Columbia County Court held in *R. v. Fraser River Harbour Commission* (1983) [22] that the portion of a parcel that was not covered by the ebb and flow of the tide under normal conditions, but only by extraordinary tides or storms, was not fish habitat. The court ruled that the Crown had failed to prove beyond a reasonable doubt that the area in question met the definition of fish habitat as constituted by "the area which is normally under normal conditions wetted and washed by water."

The *Green Plan* recognized that continued destruction of habitat threatened the sustainability of the fisheries, and called for amendments to the *Fisheries Act* to increase fines for habitat violations and improving the enforcement powers of Fisheries officers, to implement a compliance policy for habitat provisions, and to establish partnerships with the provinces to achieve greater habitat protection. In 1991, a dialogue was opened with the provinces regarding cooperative management of fish habitat and the Act was amended, substantially increasing fines for fish habitat violations. [23] An agreement was signed by the federal government with both the provincial and local governments in the Fraser River Basin, committing each to jointly developing programs. One aspect was to intensify the enforcement of the *Fisheries Act* provisions. [24]

The courts in British Columbia have been called upon with increasing frequency in recent years to consider "fish habitat" as concerns mount about declining fish stocks. In *R v. West Fraser Mills* (1992), [25] the British Columbia Provincial Court determined that the area in question was in fact fish habitat, because fish spawned and lived part of their lives in the unnamed creek near Horsefly Lake. Despite the cutting permit requiring that strips of 20 and 30 metre widths be left along Horsefly Lake and the creek, respectively, the logging company did disrupt fish habitat. Debris was left to such an extent that swimming was impeded, sources of food were removed and that water levels were lowered.

The DFO told the District of Campbell river that a 30 metre setback was required for any development along Willow Creek, givne the creek's designation as "Fisheries Waters." In *Bignell Enterprises v. District of Campbell River* (1996), [26] Bignell requested that the setback be reduced to 15 metres, on the grounds that the wider setback constituted either rezoning without a public hearing, or expropriation without compensation. However, the British Columbia Supreme Court held that the District was within its rights to impose the 30 metre setback, and observed that it was willing to allow development of the lot, but was opposed to "environmentally dubious development." Thus, the lack of usability of the lot was not caused by the condition set to protect fish habitat, but was caused by the shape of the lot and by the location of the creek.

The British Columbia Supreme Court, in *R v. Bowcott* (1998), [27] heard an appeal by the Crown of Bowcott's acquittal of not having altered fish habitat. At issue was the dumping of 4,560 cubic metres of fill in the intertidal foreshore of the Tsawwassen salt marsh. The fill area was on the seaward side of a dyke topped by a road on the foreshore, and the Crown contended that the site was fish habitat by virtue of being "part of the intertidal salt marsh upon which fish depend in order to carry out their life processes." The court held otherwise, because the Crown had proven only that "on occasion" the area is covered by water, and that such covering, being of the extremity of the tide, would be "for a short time only." The court stressed, however, that it was not concluding that the site was not fish habitat, only that the Crown had failed to provide evidence to prove that it was fish habitat.

In *R v. Crestbrook Forest Industries* (1998), [28] the Crown was also appealing an acquittal. The British Columbia Supreme Court held that a defence of "deminimus no curat lex" (the law does not concern itself with trifles) was available to Crestbrook. That is, if fish habitat was altered, but either the amount of habitat or the degree of alteration, were insignificant, then the Crown had no case. At issue was a culvert under a logging road that crossed Doctor Creek, west of Canal Flats. However, in dismissing the appeal, the Court agreed with the trial judge that the evidence did not show that fish habitat had been altered in any way.

The British Columbia Supreme Court, in *R v. Posselt Logging* (1999), [29] also dismissed the Crown's appeal, and noted that "there is no legislation requiring that a person who carries out logging on private land to leave a buffer along a bank of a fish habitat." However, there is legislation – section 35 of the *Fisheries Act* – that does prohibit the alteration of fish habitat. The court held that altering fish habitat was quite distinct from harming fish. The former was prohibited, while the latter was not. Harm to fish, however, is relevant, for "evidence of fewer fish or of less-healthy fish after the logging would be cogent circumstantial evidence of damage to fish habitat. Because the fish appeared to be unaffected by the logging operations, the court held that it was evidence that fish habitat had not been disrupted.

Finally, in *R v. Basso* (2001), [30] the British Columbia Supreme Court affirmed the trial judge's decision that Mr. Basso had caused harmful alteration of fish habitat. Mr. Basso had conducted blasting of granite rock on his property and placed the blasted rock along the edge of the shore, including in the intertidal zone, in the Wainright Basin for the purpose of preventing further erosion of his property. He had previously began the process of rezoning his property and had sought DFO approval but did not follow through on the procedure prior to implementing his erosion prevention measures. Expert evidence was given at trial that a plant known as sedgegrass was growing in some or all of the parts of the 352 square metre intertidal zone where the rock had been placed and it was interpreted by the court that some of the rock would be under water during all or some of the high tides. Sedgegrass is important to young salmon for both food and

protection, and "in covering up sedgegrass with rock, the defendant therefore caused harmful alteration, disruption, or destruction of fish habitat."

A conclusion to be drawn from these cases is that it is very difficult for the Crown to demonstrate that fish habitat has been altered. Moreover, such alteration or disruption must be significant for the legislation to be breached. Finally, the existence and spatial extent of fish habitat is dependent on the site being fish habitat more than merely occasionally or infrequently. This latter distinction is particularly significant on tidal waters, which must be fish habitat most of the time to fall within the purview of section 35 of the *Fisheries Act*. However, the courts have enforced riparian strips or setbacks when established, which will support the conservation of fish habitat as including the strip of land beyond that covered by water a significant amount of the time.

The provincial response to the *Green Plan* came in 1991, when British Columbia released *Environment 2001,* a strategic report that "identifies the environmental challenges facing [the] province and outlines BC Environment's commitment to address them." [31] Included in this document are strategies for sustaining water, fisheries and wildlife as these resources have environmental, recreational and economic significance. Protected fisheries habitats provide recreation for most British Columbians, being an essential factor in tourism and hence contribute significantly to the economy of the province.

In 1993, the province and the federal Department of Fisheries and Oceans (DFO) jointly published the *Land Development Guidelines*. [32] They recommended that riparian strips, referred to as leave strips, should be established along watercourses where development should be precluded in order to preserve and protect fish habitat (Figure 2). The minimum width of these strips was recommended to be 15 metres measured from the high water mark as determined by the mean annual flood event (spring run off) or the top of bank for residential/low density areas, with this value being increased to 30 metres for commercial/high density areas. For steeply sloped areas, the leave strip should be measured from the top of the bank, or at the first significant and regular break that provides a minimum 15 metre wide strip. [33] Since their introduction, the guidelines have provided the basis for the establishment of riparian strips for conservation purposes in the province.

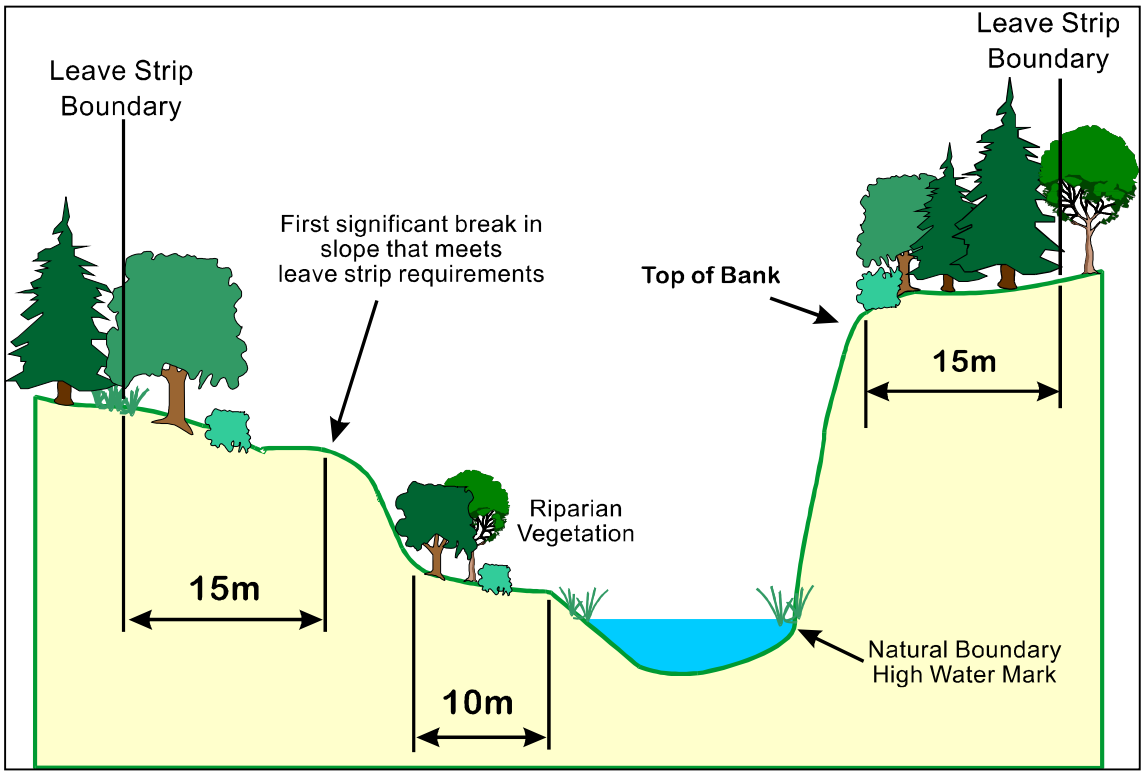

Figure 2 - Leave Strips (adapted from *Land Development Guidelines*,1993)

In 1997, British Columbia introduced new fisheries legislation with the intention of delegating some powers to municipalities respecting the protection of fish stocks and more importantly fish habitat. The *Fish Protection Act* [34] was intended to address the loss of fish habitat that occurs with development near urban streams. [35] It was developed in response to the fact that the *Land Development Guidelines* are only "guidelines." [36] Under this legislation, the health of these riparian habitats could be maintained through directives from municipalities to land owners including the retention of riparian strips for any development near urban streams as a component of zoning bylaws.

There have been delays in establishing the regulations under the *Fish Protection Act*. These arose from two years of extensive consultation including a pilot test completed in 1999. In March 2000, the Sensitive Streams Designation and Licensing Regulation was enacted by Order-in-Council 404/2000. It designated 15 streams with sensitive status and affects any application for approval or amendment to a water license in respect to one of these streams.

Protection of riparian areas in support of fish is the purpose of the Streamside Protection Regulation (SPR). A first draft of the SPR was completed in January 2000. Consultation through the summer of 2000 with the Union of British Columbia Municipalities, local governments, landowners, community groups and developers provided clarification of the proposed directives. Concerns identified included the required approach being too prescriptive and inflexible, disagreement on streamside protection area widths, and insufficient time for implementation. A second draft was completed and submitted for further consultation in October 2000. [37]

The Streamside Protection Regulation was enacted through Order-in-Council 34/2001 on January 25th, 2001 with the declared purpose of protecting streamside protection and enhancement areas (SPEA) from residential, commercial and industrial development. The mandated extent of the protected area within a SPEA is dependent on the existing or potential natural state of vegetation for the particular stream on which it is being created. The required strip widths for SPEA is varied dependent on the existing or potential vegetation and whether the stream is fish bearing. Highly developed areas or areas where the potential for vegetation is discontinuous require a minimum five metre strip width on non-fish bearing streams and a 15 metre minimum width on fish bearing streams. Where the existing or potential vegetation is at a minimum of 30 metres wide on fish bearing streams or permanent non-fish bearing streams, a minimum of a 30 metre strip width is required. The strips are defined as measured perpendicularly away from the top of bank – the point closest to the boundary of the stream where the break in the slope occurs such that the slope beyond it is flatter than 3:1 for a minimum of 15 metres. Fourteen Regional Districts and all the municipalities within them are identified as being subject to the SPR and have five years from its enactment to implement the protection measures.

The development of the *Fish Protection Act* and its associated regulations are indicative that the continued health of riparian ecosystems is vital if access to fisheries is to be available for future generations. Therefore, one key role riparian strips may have in sustainability is the conservation and protection of fish habitat.

Riparian strips in British Columbia may also have **economic** significance. Due to the mountainous nature of the province, British Columbia waterways are prone to seasonal

flooding and this may result in significant economic losses. Moist air from the Pacific Ocean is driven by the prevailing westerly winds into the mountains where it condenses in the form of rain or snow. Flooding predominately occurs either from excessive rainfall or quick spring snowmelt. [38]

The greatest Fraser River flood occurred in 1894 at a time when the valley was still sparsely populated. The floods of 1948 in the Fraser and Columbian Basins resulted in damage to two thousand homes, caused the evacuation of sixteen thousand residents and cost close to $20 million ($ 1948). [39] The last major flooding in the province occurred in 1972, with damages amounting to $10 million ($ 1972). [40] Since then, there have been smaller localized floods – in Pemberton in 1984 causing over $8 million in damages and in the Okanagan in 1990 resulting in $18 million in damage and seven deaths. [41]

Strategies for improving emergency preparedness and reducing future economic loss must then be a consideration of sustainability when it comes to riparian land. However, increased urbanization continues to encroach onto streams, rivers and coastal zones. In the process, the implementation of floodplain protection and drainage projects has eliminated many wetlands, much stream habitat, and other important fish and wildlife areas. [42]

Despite the measures being taken in floodplain management, development in these areas will likely continue to result in economic costs in addition to the potential harm inflicted on the riparian environment. A flood having the magnitude of the 1894 flood is expected to occur on the Fraser River sometime in the 60-year period 1973 to 2032. [43] The 1976 Fraser River Upstream Storage Review Report suggested that a flood of this magnitude would result in damage in excess of $300 million ($1.3 billion in $ 2000). [44] As a result, in the mid-1970s there was a shift in floodplain management away from using structural controls, such as dyking, and towards including planning and regulatory controls, such as building code requirements for floodproofing, as a means to reduce public danger and expense from flooding. [45]

Yet, development pressure remains high within floodplain areas. Land use has intensified and population has continued to increase dramatically in these areas. For

example, the municipality of Richmond is located entirely on an estuarine island and all development must be protected from flooding. [46] Regardless, Richmond has had a population increase of 99% between 1976 and 1999 (compared with an increase of 59% in the general population of the province and 78% for the Greater Vancouver Regional District). [47]

Initially, settlement along water by newcomers to British Columbia was likely for economic reasons. One clear example is the logging industry and the proliferation of mills along the coast over the last 135 years. In a review of narratives from early Vancouver settlers, Matthews noted that "settlements of all our early homes, camps, etc were governed by water: wells, springs, creeks, and this lake [Trout Lake] must have had some influence on the location of the Hastings Sawmill," [48] which was built in 1865. At the time, access to water served the dual purpose of providing the transport mechanism for the logging industry and meeting the basic need of water for human existence.

Water also fulfills a social or recreational role:

> Resources, especially outdoor recreation, are of tremendous value to our individual and collective well being. Most of us cannot envision a future without trails for leisurely strolls or strenuous hikes… We shy away from a tomorrow with no streams for floating, canoeing or rafting. [49]

Some activities only have a need to be near or along water, without actually requiring access to it. In addition to the trails along waterways for leisurely strolls, people often congregate along water to camp and sunbathe. [50]

The third consideration for establishing riparian strips for the purpose of sustainability is social in nature. More specifically, riparian strips provide **access** to water and riparian areas, whether it is for economic or recreational pursuits. This can be viewed in two ways, as access *to* water, allowing interaction with the water, and as access *along* water, which runs parallel but separate from the water. Access *to* water provides for activities such as fishing, swimming and boating, while access *along* water allows the enjoyment of the aesthetic qualities of the riparian area but prevents or inhibits easy interaction with the water.

Therefore, the use of riparian strips must serve three purposes in terms of sustainability. First, riparian strips must serve to maintain or **conserve** the environment such as fish habitat. Second, they must minimize **economic** impacts that may result from allowing development in floodplain areas. Finally, they must fulfill the role of meeting social and recreational needs by providing **access** to and along water.

Mechanisms

There are several means or mechanisms that are suggested in the literature that would promote sustainability of riparian strips. These mechanisms fall within the categories of purchasing, reserving, restricting or dedicating riparian land. **Purchase** is the acquisition for value of fee simple title to land. The **reservation** of land occurs on the transfer of land where a portion is held back by the grantor. The Crown may use this method when granting land by excepting a riparian strip. A **restriction** may be placed on the use of land without the actual transfer of ownership. The final possible method for creating a riparian strip is the **dedication** of the strip by the owner to another party.

The mechanisms identified in the literature for creating riparian strips include zoning, taxation, and public acquisition and land management. Zoning and taxation fall within the category of restrictions while public acquisition may result from either a purchase or a dedication. The main focus of the literature in reviewing these mechanisms has been to achieve the conservation of riparian areas. Yet, the mechanisms could theoretically be used to ensure that the economic and access components of sustainability identified earlier are also achievable.

Two types of zoning establish riparian strips: restricted areas and development control. Restricted areas include present lands designated as parkways, ecological reserves, agricultural land, and other areas that should be set aside from future commercial and residential development. Guidelines establish what activities may be conducted in these areas. The British Columbia Forestry Guidelines require that reserve zones must be maintained along all streams where the cutting of timber is limited or restricted. [51] Similary, the *Land Development Guidelines* provide for leave strips adjacent to

watercourses where development should be precluded from occurring for the protection of fish habitat.

From the municipal perspective, general Official Community Plan (OCP) bylaws enacted by local governments under the authority of the *Municipal Act* (now the *Local Government Act*) can outline broad objectives and policies respecting land use. [52] In this manner, municipalities may lay the groundwork for setting out restricted riparian areas. A municipality's zoning bylaws may be the mechanism for putting these objectives and policies into effect.

The implementation of development control is a more direct control technique available to municipalities, again under the auspices of the *Local Government Act*. In this process, the municipality issues development permits upon an application demonstrating that it was in compliance with the planning policies set out for that area. Municipalities have effectively used such planning powers for the regulation and management of the environment in circumstances where development near environmentally sensitive areas is undesirable. [53] The potential drawback to this process is that each application is addressed on its own merits and may suffer from approval of projects that would not be approved under more stringent planning bylaws.

One further disadvantage to the use of zoning techniques noted in the literature is that while these mechanisms can effectively restrict development, they cannot provide for public access. [54] The land remains in private possession and is only subject to the restrictions noted in the applicable zoning bylaws.

Public acquisition of land or interests in land is an alternative to zoning legislation. Interest in land can be purchased outright in fee simple by municipalities or lesser interests can be acquired to prevent or support certain uses on the land. [55] Municipalities may also require owners to dedicate fee simple interest in specified watercourse areas. [56] Dedication allows a municipality to avoid the prohibitive costs associated with purchase. Fee simple acquisition of a riparian strip – whether purchased or dedicated – provides the main advantage in that full ownership rights come with the strip. The authority that has the title to the land may allow multiple public uses of the land. Finally, if the government

acquired the land for public use, there would be no need to negotiate public access for enjoyment of the riparian area. [57]

Lesser interests may also be obtained in land by public authorities. Interests may be negotiated with landowners that may have requirements or restrictions attached to them, and are known respectively as positive and negative easements. Positive easements may require that the landowner allow an activity such as a right of access in the form of a Right of Way over the land. Negative easements, also known as restrictive covenants, may restrict what the landowner may do with land. [58]

These techniques have not been used in British Columbia for sustainability purposes until recently due to the common law nature of easements that the legal system supports. From a land conservation standpoint, the easement was not considered a viable method, as any future dominant owner could simply request that the easement be dropped from the property. [59] Further, the confusion with this mechanism may contribute to its lack of use as "there is no definitive understanding as to what in fact a conservation servitude is (easement, restrictive covenant, or equitable servitude)." [60]

Several Canadian provinces, including British Columbia, have now enacted legislation that allows conservation covenants – a specific form of restrictive covenant – to be granted to municipalities, and also to approved land trust organizations such as the Nature Conservancy. [61] The advantage to the municipality in proceeding with the conservation covenant is it will restrict or limit the development of the property, thus maintaining riparian habitat.

Taxation can be used as a method of encouraging private owners to support land conservancy. Tax breaks are now common practice to those landowners that practice agriculture. In British Columbia, the *Assessment Act* stipulates that farmland must "be valued at its actual value as a farm, without regard to its value for other purposes." [62] Since the land in question is being used for a purpose that differs from a commercial venture, the taxing of the property at market value would place an incentive on the owner to subdivide their land and develop it for financial gain. By acknowledging the benefit as a farm and reducing taxes, the incentive to develop is reduced. [63]

With the tax breaks, the owner is essentially rewarded for maintaining the environmental integrity of his land in its agricultural state. A similar argument may be made for a person who grants a conservation covenant for a riparian strip on their land and receives a reduced tax assessment. This is due to the diminished market value of the overall property with the covenant as an encumbrance on title. These tax exemptions may be continued on a year to year basis at the discretion of the municipality and would only be valid where the local government is a party to the conservation covenant. Further, an incentive to owners to comply with a conservation covenant is the provision for recapture of taxes for breach of the covenant. The use of tax exemptions for riparian property conservation covenants is permissive and local governments have flexibility in choosing whether or not to grant these exemptions. [64]

The literature shows that the mechanisms for promoting sustainability are ownership driven. If a municipality can obtain fee simple interest through either dedication or purchase, then as owner it may dictate what activity is acceptable on the riparian strip. However, if the strip remains in private ownership then a municipality has four options, two that discourage harmful activities that may be detrimental to sustainability and two that encourage sustainability. The municipality may discourage harmful activity through its zoning bylaws and may require that a restrictive covenant be registered on title restricting an activity on that particular strip. Alternatively, they can encourage sustainability by offering a taxation exemption to the owner for establishing a conservation covenant and they may obtain an easement in the form of a Right of Way allowing public access across the strip.

The mechanisms for establishing riparian strips have been assessed in various applications in British Columbia. However, in each case the focus has expressly investigated the conservation issue, and did not address access to or along water or economic loss prevention.

In 1995, under the authority of the Fraser River Action Plan, an assessment of local authority measures adopted for the protection of aquatic and riparian habitat was completed for the lower Fraser Valley. [65] Methodology in this study included interviews with local government staff and a review of planning documents. The assessment found

that in the previous ten years local governments had made progress in protecting riparian habitat. It also found that municipalities were tailoring their policies and regulations on stream stewardship to local circumstances. No standardized approach was being implemented. Means of identifying riparian habitat included using information supplied by DFO and using topographic mapping. Techniques used included designating environmentally sensitive areas within Official Community Plans (OCP), using Development Permit Areas, and establishing fixed setbacks (ranging from 7.5 to 30 metres) from named watercourses in OCP documents. The report concluded that municipalities were concerned about their liability in terms of investigations for violations of environmental legislation, disagreed about the extent of the role that municipalities should assume in protecting habitat, and indicated that some environmental agencies over-valued or placed too much emphasis on some habitat areas.

A second report sanctioned by the Fraser River Action Plan in 1995 investigated the effectiveness of *Land Title Act* section 215 covenants (now section 219 covenants) in protecting riparian habitat on private land in Surrey. [66] Either the Ministry of Environment, Lands and Park, the municipality, or a conservation organization could hold section 215 covenants on private lands. Regardless of who holds the covenant, the landowner is responsible for maintaining the covenanted area in its original state, while the covenant holder may only monitor and enforce the terms of the covenant. The report evaluated the viability of using covenants to protect fish habitat in six streams within the municipality. It found that encroachment occurred within 75% of the covenanted areas. There was no significant difference encountered between encroachment on properties with and without covenants. As such, the study concluded that covenants were not sufficient on their own to provide protection of riparian habitat.

The following year, a further examination of section 215 covenants for protecting private urban riparian zones was completed. [67] This thesis examined five municipalities in British Columbia – North Vancouver District, Surrey, Maple Ridge, and Langley on the lower mainland and Highlands District on Vancouver Island. The investigation was supplemented with interviews of federal and provincial government representatives. The findings of the earlier research conducted in Surrey were corroborated in this report.

Deficiencies were found to exist with the use of covenants for the protection of riparian zones and included lack of awareness about the mechanism, insufficient monitoring and enforcement methods, legal limitations, and jurisdictional issues. The jointly-held covenant was identified as the most promising solution to protecting privately held riparian areas. Both a municipality and a conservation organization would hold this type of covenant, where each would then share the responsibility of ensuring that landowners preserved the covenanted area in its original state. The thesis acknowledged that section 215 covenants are but one tool in protecting riparian zones and to achieve an overall conservation of these areas, a combination of the various mechanisms may be necessary.

In 1996, the Fraser River Action Plan published a further report that assessed the various mechanisms for protecting aquatic and riparian habitat. [68] It assessed and made recommendations regarding fifteen different mechanisms covering both aquatic and riparian areas. Recommendations that were directly applicable to the conservation of riparian habitat included: that the [*Local Government Act*] provisions should be revised so that the development of Official Community Plans should explicitly require consideration of riparian resources; that zoning bylaws of municipalities should be optimized to incorporate the provisions of the *Land Development Guidelines* "especially for the establishment of consistent leave strips;" [69] that environmental protection bylaws should be improved by incorporating the *Land Development Guideline* standards; and that procedures should be developed so as to ensure that private land owners are aware of covenant provisions.

Each of the previous studies has considered only the conservation aspect of sustainability. The remainder of this thesis builds upon this point, with an exploration of how and why these mechanisms have been used in purchasing, reserving, restricting, and dedicating riparian strips for the conservation, economic, and access purposes of sustainability. However, in order to evaluate the effectiveness of riparian strips at achieving these purposes it is necessary to provide benchmarks for the assessment.

As can be inferred with the new provisions of the Streamside Protection Regulation, conservation must address current conditions and therefore measures may be varied dependent on the existing or potential vegetation within a riparian area. As such, the

establishment of riparian strips for conservation purposes will be assessed here based on whether the strip maintains or improves the riparian strip area in terms of natural vegetation. Economic concerns can be assessed in a straightforward manner by establishing whether development is prohibited in floodplain areas. Finally, access can be assessed in the most straightforward manner, by substantiating whether public access is permitted to and along the water within the strip.

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III. CROWN GRANT

A simple means for reserving or restricting the use of riparian land is by doing so at the time when the land first passes into private ownership. Since private title to land within British Columbia originates in a grant from the Crown, an evaluation of provincial legislation and land policy from 1871 will prove useful. [1] Two case studies, one on the west coast of Vancouver Island and the other located in West Chilcotin, are used to illustrate the provincial legislation and policy regarding riparian areas.

Legislation

Land Ordinance

The first consolidation of the laws affecting Crown lands in the period following the creation of British Columbia came in the form of the *Land Ordinance, 1870*. Assented to on June 1st, 1870, it preceded the formation of the province and set the tone for dealings with Crown lands in the province's earliest years.

The focus of the Crown in the period preceding British Columbia joining Confederation in 1871 and in the initial years after was to encourage settlement of the land. [2] The *Land Ordinance* set the rules by which settlers could pre-empt, lease, purchase or obtain a free grant of Crown land. At this time, there was no mention of reserving or restricting the use of riparian areas. Indeed, with the focus on encouraging settlement, precluding access to waterfront land for settlement purposes would have been counterproductive. The earlier discovery of gold in the Fraser Valley, Okanagan and northward toward Williams Lake in the late 1850s had led to an influx of miners to these areas and several towns being settled. Two main roads into the interior existed at the time, the Douglas Road and the Dewdney Road. The purpose of both roads was to center the economy of the province on the Fraser River. [3]

The first riparian restriction in legislation came in February 1873, with the *Land Ordinance Amendment Act, 1873*. This Act repealed Form H of the earlier legislation and replaced it with a "Form of Crown grant." The following restriction within the text of the Crown grant was:

> That it shall at all times be lawful for Us … to resume any part of the said lands which it may be deemed necessary to resume for making roads, canals, bridges, **tow paths**, or other works of public utility or convenience, so nevertheless that the lands so to be resumed shall not exceed one-twentieth part of the whole lands aforesaid, and that no such resumption shall be made of any lands on which any buildings may have been erected … [emphasis added]

Waterways were a convenient means of travel at the time. The provision was made to allow for, among other things, tow paths to be created and maintained along waterfront areas. It did not state explicitly that the restriction applied to riparian land alone; however, it did allow the Crown to regain the waterfront area if it was considered a requirement for public utility.

As a requirement of entering Confederation, the province of British Columbia had stipulated that a national railway system was to be built simultaneously from the Pacific towards the Rocky Mountains and from the east towards the Pacific. [4] In complying with the requirement to convey to the Dominion Government sufficient land for the railway line construction, the Provincial Secretary began to set aside reserves of land along anticipated paths that the railway might take. These were large reserves, one early example being the creation of a Railway Reserve of a strip of land twenty miles wide along the eastern coast of Vancouver Island, between Seymour Narrows and Esquimalt in 1873. These lands, along with a strip running through the interior of the province, became known as the Railway Belt. Still, these reserves only roughly followed the waterways as the railway was likely to follow the simplest path to the coast, which would mean following the watercourses. There was no other policy or legislation in place at the time regarding riparian lands.

The Land Act

There were no other legislative requirements placed on riparian lands for the next three decades. The *Land Act Amendment Act, 1906*, introduced a new section to the *Land Act* that was to affect all grants of land along the coast. Section 17 stated:

> There **shall** be reserved from all grants of Crown land extending to the sea, or any inlet thereof, a strip of land one chain in width, measured from high water mark. The land so reserved, or any portion thereof, may be

> used for a highway, or may be leased or granted upon such terms as the Lieutenant-Governor in Council may deem proper. [emphasis added]

This section stipulated that a one chain strip *shall*, or must, be reserved from all grants of Crown land along coastal waters.

In 1908, an Act to consolidate and amend the laws affecting Crown lands was passed. The *Crown Lands Act, 1908* restated the above reservation in section 85 with some juxtaposition of phrases:

> There **shall** be reserved a strip of land, one chain in width, measured from high water mark, from all grants of Crown land extending to the sea, or any inlet thereof. The land so reserved, or any portion thereof, may be used for a highway, or may be leased or granted upon such terms as the Lieutenant-Governor in Council may deem proper. [emphasis added]

Editorial comment at the time indicated that in prior Crown grants, the above exception was recorded in the actual papers, while the passing of the new section made it statutory.[5] Considering the presence of the 1906 amendment codifying the reservation section two full years earlier, the noted editorial comment may be suspect.

The section was amended two years later by the *Land Act Amendment Act, 1910*. Section 85 of the *Land Act* was repealed and replaced by:

> There **may** be reserved a strip of land one chain in width, measured from high-water mark, from all Crown land extending to the sea, or any inlet thereof, for which application is made to pre-empt, lease or purchase. The land so reserved, or any portion thereof, may be used for highway, or may be leased or granted upon such terms as the Lieutenant-Governor in Council may deem proper. [emphasis added]

The prescriptive *shall* was replaced by the permissive *may*, thus reducing the obligation on the government to withhold the strip of land on application for grant. In Legislative Assembly discussion regarding the amendments to the Act, the purpose of the change was questioned. Speculation from H.C. Brewster, an opposition member, was reported to include:

> The bill was padded out with sections which only changed the old section in a word or two. Some of them he had to read twice before he could find the change, another simply changed “shall” to “may” and as a whole the bill seemed to be hiding something … Section 85 of the Act at present said that there “shall be reserved … to preempt, lease or purchase.” It was

> proposed to change "shall" to "may," the effect of which would be that communities by the sea would find themselves shut out from the sea. The evils of this were seen at Alberni, where the whole waterfront, with the exception of one street in New Alberni, was closed up. [6]

However, the vast majority of discussion in the Legislative Assembly regarding this amendment centered on the changes to timber licences. Brewster's comments appeared to raise the question whether the amendments to the strip reservation section was merely a means to divert attention. Yet his comments also shed some light on the purpose of the reservation section within the legislation. The reservation of a strip of land along the waterfront provided access to the water for communities, in order to avoid the situation that befell Alberni, with almost complete alienation of waterfront at the time of grant.

The section was to remain in a permissive form for the next sixty years. When the *Land Act* was rewritten in 1970, the section permitting the reservation of a riparian strip was left out of the legislation. The 1970 *Land Act* Bill passed through the Legislature without amendment. [7]

Crown Land Policy

Prior to 1958, Crown lands were disposed of generally on a case-by-case basis upon individual applications. It was determined that through this disposition methodology, land with high public recreational potential – including waterfront – was diminishing. Therefore, under the direction of Ray Williston, the Minister of Lands and Forests, in July 1958 a new provincial policy was established protecting provincial lands fronting on lakes from further permanent alienation. Williston also stated that the principles of the policy should be applied on desirable river or sea frontage land as well. [8]

The Crown riparian land, referred to as shoreland, was categorized into three classes. Class 1 provided the highest recreational value, and Class 3 provided the lowest recreational opportunities. The policy required that sufficient Class 1 land be retained to meet long-term public recreational needs. Any remaining Class 1 and all Class 2 lands would be available through purchase of leaseholds only. Only Class 3 lands and all lands in excess of a distance of 10 chains from the waterfront were eligible for fee simple purchase. The policy was expanded in 1959 to include Crown river frontage as well. [9]

In May 1971, the policy was further amended to preclude any application brought forward on an individual basis for residential or recreational purposes. For these purposes, only applications based on subdivision planning and development methodologies would be considered. Any individual application initiated prior to this date was dealt with under the preceding policy. Where a strong public demand was made, the Provincial Lands Service planned subdivisions for summer residential use on lakes, but only after adequate shoreland had been set aside for public use, and only on a leasehold basis. [10]

In 1979, the definition of shoreland was reduced from the 10 chain strip to land lying within 100 metres of the high water mark. Land upland from this limit was eligible for purchase, while the shoreland could only be leased. The lease-only policy provided the government with the flexibility to meet future demands for water-based recreation by converting a leasehold, upon its expiry, into a provincial park if the need arose. This continued the sentiment of the original policy established in 1958. [11]

Regardless of the classification, a 1985 review of land use policy referred to the existing practice of reserving a 3 to 5 metre public walkway or access strip, running parallel to the natural boundary, from leased Crown shoreland for the protection of public recreation interests.[12] However, there was no indication as to when this practice was first initiated. The original policy instituted by Williston in 1958 only required that shoreland be available as lease-only. No other documentation was found that referred to the inception of the public access strip policy and when it first became effective remains uncertain. [13]

In the 1985 review, the Crown considered allowing the sale of new parcels and the conversion of the existing lease tenures to fee simple via purchase. In each of these situations, the reservation of a public access strip was to be considered on a case-by-case basis. One argument in favour of continued use of the access strip reservation was to prevent any possible constraint on Ministry activity along the waterfront. By reserving the strip, the Crown would retain the riparian rights and would not be precluded from supporting various aquatic uses that might infringe upon a private riparian owner – aquaculture and loghandling in the water contiguous with the parcel being prime examples. [14]

Crown Land Policy in its current form continues to recognize the value and uniqueness of riparian lands. Offering tenure in the form of leases remains the primary policy. Purchase of shoreland is possible under certain conditions, but individual applications will still not be accepted for recreational or residential purposes. A minimum of 25% of shoreland around a water body must be retained for public use. This is over and above any requirement for public access that may be provided for in subdivision plans as required by a municipality.

Nonetheless, those persons holding existing shoreland leases may apply to purchase the parcel held under such a lease. Prior to purchase, however, consultation with other governmental agencies may be required. The Ministry of Environment must be consulted where there is potential for either flood hazard or conflict with fish and wildlife management objectives. Further, a restrictive covenant prohibiting development must be registered on title for a parcel that is located in a floodplain or where the Ministry of Environment expresses concern about flooding. [15]

The reservation of a public access strip along the natural boundary is not required on disposition of Crown shoreland as a matter of current policy. However, if it is deemed necessary to protect public access to lands beyond the parcel, then a public walkway strip will be reserved from the parcel by survey. Similarly, in instances where it is a requirement that riparian rights be retained by the Crown, then the matter will be referred to the Surveyor General for assistance. In either case, the extent of the riparian strip to be retained by the Crown is not of a fixed width established in policy. [16]

Riparian strips continue to be established in grants of Crown land when circumstances dictate that they are necessary. The omission of the riparian strip reservation in the 1970 rewriting of the *Land Act* may have been as a result of the existing policy position. One possible rationale is that policy provided direction for the disposal of riparian land in general rather than dealing with only coastal land as in the old provision. [17]

Two case studies examine Crown grants. The first is located on the western coast of Vancouver Island and entails a reservation under the *Land Act*, and the second involves the implementation of Crown policy with respect to riparian strips in the West Chilcotin.

Monashee

Description: The legal description is: District Lot 134, Clayoquot District and fronts on Long Beach. The property consists of sixty-four (64) acres more or less and is now included within the Pacific Rim National Park (Figure 3).

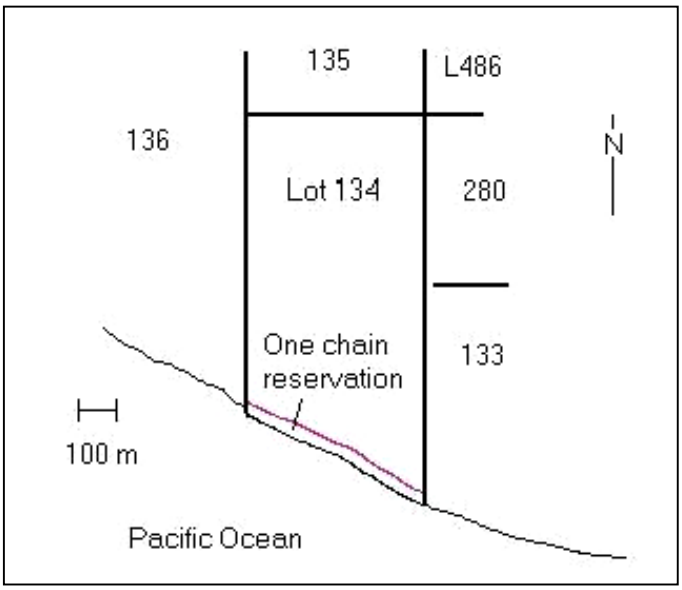

Figure 3 – Monashee Reservation

Chronology:

February 2, 1911: Ada Leverson received the original Crown grant of District Lot 134 by letters patent under the great seal of the province. Title was granted to the lot:

> Said to contain sixty-four acres, more or less, and more particularly described on the map or plan hereunto annexed and coloured red … excepting thereout a strip of land one chain in width measured from high water mark. [18]

The original purpose of the riparian strip was not determined in this case, though it was speculated that the Crown might have intended it for use as a road or trail. [19] Whether road or trail, there seemed to be agreement that it was for access purposes as no mention was made of conservation or flood concerns.

September 19, 1940: The Registered Plans 722R and 723R were deposited at Land Titles. These two plans outlined in red the subdivisions of interior portions of District Lot 134 along the Uculet-Tofino Road. Title to these parcels was registered in the federal Crown in care of the Ministry of Canadian Heritage. [20]

March 6, 1964: Monashee Enterprises acquired title to District Lot 134, excepting the one chain strip of land measured from high water mark and the parts outlined in red on plans 722R and 723R. [21]

October 28, 1977: Pursuant to Section 5 of the *West Coast National Park Act*, S.B.C. 1969, c. 41, the Minister of Recreation and Conservation expropriated Lot 134, excepting the one chain strip of land measured from high water mark and the parts outlined in red on plans 722R and 723R. [22]

July 28th, 1978: Monashee Enterprises contested the compensation it received for the expropriation of Lot 134 and proceeded with legal action against the Minister of Recreation and Conservation. Monashee argued that 5.87 acres of accreted land should be attached to the upland portion of the parcel, effectively making ambulatory the upland boundary of a one chain strip reserved by the Crown. The British Columbia Supreme Court interpreted the one chain strip to be measured "from high water mark" as it exists from time to time, and held that at the time of expropriation, Monashee owned an additional 5.87 acres of upland beyond the one chain strip. [23]

September 25, 1978: Pursuant to Section 6 of the *West Coast National Park Act*, S.B.C. 1969, c. 41, on the recommendation of the Minister of Recreation and Conservation, the expropriated Lot 134, excepting the one chain strip of land measured from high water mark and the parts outlined in red on plans 722R and 723R was transferred to the Crown in right of Canada. The Lot was amalgamated into the Pacific Rim National Park. [24]

May 5th, 1981: On appeal by the Minister of Recreation and Conservation, the British Columbia Court of Appeal ruled that the upland limit of the one chain strip was fixed in fact. If the upland limit of a strip were to be considered mobile, then an upland owner would suffer loss of land with erosion. An upland owner would not have the right to trespass upon a strip to attempt to prevent such erosion and as such, this would be an inconvenience upon an upland owner. The court felt that such an inconvenience should be found to exist only in instances where it was unavoidable. It reasoned that it would be unavoidable at the natural boundary, but not at the upward limit of a strip. Further, the court presumed that a strip reserved by the Crown could be found to be ambulatory, but no case law was raised to support this presumption. The court ruled that it could not find that an ambulatory strip was created "in the absence of words pointing to that intention and [it] find no such words in this reservation or in the legislation that led to it." [25]

Monashee provides an excellent example of a *Land Act* reservation in the form of an exception, and the court's interpretation of the character of the created riparian strip. From the decision it is clear that riparian strips created in British Columbia under this provision have a fixed upland boundary. Ambulatory strips are possible in law, [26] but this would have to be expressly stated when such a strip was created, either through the wording of the applicable legislation or in the grant itself.

Dean River

Description: The parcel is 5.45 acres in an area located in Range 3, Coast District of the West Chilcoltin. It fronts on the north side of the Dean River southeast of Anihim Lake and north of Nimpo Lake (Figure 4).

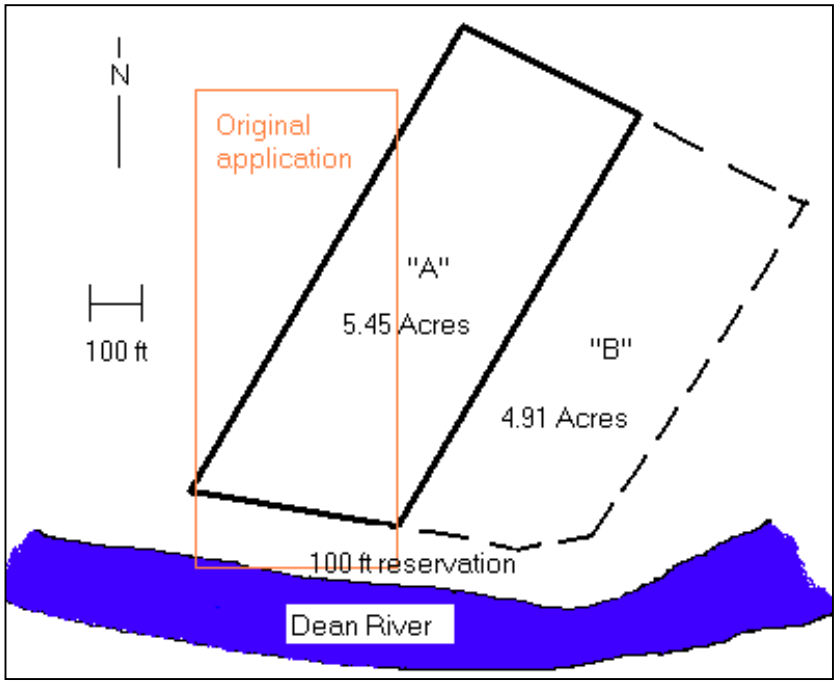

Figure 4 – Dean River Reservation

Chronology:

May 25th, 1967: William Clark made application in Williams Lake to purchase as a homesight approximately five acres of unreserved Crown land along the north side of the Dean River in the vicinity of Lot 1637 – Range 3 – Coast District. The application noted that Clark placed a post at the southeast corner of the staked land with the original intent of purchasing a rectangular plot of land situated on a north-south line measuring 660 by 330 feet. [27]

November 29th, 1967: The Deputy Land Inspector with the Lands Branch filed a Land Classification Report on the unsurveyed Crown land for which Clark had applied. The parcel was located on the east shore of the Dean River and was approximately 5 acres in

size. The land was classified as both Forest land suitable as forest crop and Class 3 land suitable for grazing, pasture, residential, industrial and commercial use. It was recommended upon approval of a Fish Biologist that a one chain width river frontage strip be excepted upon transfer, because the river provided excellent recreational fishing opportunity at this site. The final recommendation was to support the application as a residential lease with an option to purchase subject to departmental policies. [28]

December 4th, 1967: The Chief Land Inspector requested input from the Land Inspector responsible for classifying the unsurveyed Crown land on the merits of developing a small Crown subdivision on this site. As an alternative, he asked whether individual applications as made by Clark would be conducive to adding adjacent sites if applicants appeared. [29]

February 16th, 1968: The Director of Lands advised Clark that, in light of the field report which had indicated that the land in his application to purchase was of a high recreational value, it was necessary to restrict alienation to leasehold. Any lease to be issued would be restricted to a width of 100 feet along the river and would only run to a point one chain from the bank of the Dean River. The one chain strip was to be reserved expressly to provide access by the public to the river for fishing. The application to lease would be approved as soon as Clark had the parcel surveyed by a British Columbia Land Surveyor. The proposed lease would contain a clause that stated:

> Provided, also, that this lease is issued and accepted subject to free and unrestricted use, by the general public, for recreational and fishing purposes, of a strip of land one chain wide and paralleling the banks of the Dean River.

The lease would be issued for a period of twenty-one years. [30]

April 1st, 1968: The Chief Land Inspector requested that the local Land Inspection Department and the local Fish Biologist investigate whether there were sufficient reserves for use, recreation and enjoyment of the public in the vicinity of Clark's application, and whether these reserves in conjunction with the proposed one chain strip – or with a 100 foot reservation – along the river would be sufficient to protect the public

interest. If so, then the Crown would consider offering leases leading to purchase for the land behind the one chain or 100 foot reservation. [31]

June 21st, 1968: A Lands Branch Memorandum described the extent of public reserves along the Dean River in the vicinity of Clark's application. There was a public reserve two and a half miles to the southeast of the site, and this, together with a one chain strip along the river, was considered adequate to protect public interest. Where the Clark application fronts on the Dean River, the water was shallow, the channel was filled with reeds, and the river was not easy to navigate. Fishing was also problematic. Therefore, there did not appear to be sufficient reason to limit Clark's application to 100 feet of frontage. Indeed, the memo noted that Clark had objected to this limitation, and wished to build a house on the full five acres he had originally requested. [32]

Summer 1968: A Lands Branch Note to File Memorandum provided guidelines for the alienation of lands fronting on rivers. The handwritten memo stated that if a river had no recreational potential (as for fishing) then land could be sold without a frontage limitation along its banks. If there was recreational potential for the river, then a 100 foot reservation along the bank of the river should be held against an application. The only variation on this would be if the river and frontage would be conducive to park or picnic site development, in which case there could only be an option to lease the land, with both the 100 foot reservation and a limitation of 100 feet of frontage. [33]

July 3rd, 1968: The Director of Lands approved Clark's application for the five acre parcel of land on a lease-develop-purchase basis. The initial lease was approved for three years, subject to renewal for a further period of seven years. To qualify for renewal, a habitable dwelling had to be permanently fixed to the land by the end of the initial three year period. Following the completion of a habitable dwelling, the purchase of the leasehold would become an option. Excepted from the lease and from any future option to purchase was a 100 foot strip running adjacent to the river to provide public access to the river for fishing purposes. [34]

July 15th, 1968: Thomas Williams, BCLS surveyed the 5.45 acre Lot 93 "A" parcel along the north side of the Dean River. The southwest and southeast corners of the parcel

were monumented. The distances from the river noted on the plan of survey for each were approximately 110 feet and approximately 100 feet, respectively, meeting the provincial setback requirement. [35]

The Dean River study demonstrates the effect of provincial policy in establishing riparian strips along watercourses that have recreational value. Since the Dean River had been identified as a viable recreational fishing river, Lands Branch followed policy and only allowed a leasehold tenure to be granted for this application with a maximum 100 foot frontage. Only when it was clear that the topography of the river in the area under discussion was not suitable for direct access and fishing, was purchase allowed as a future option on the full frontage originally requested. Even so, with the physical conditions of the river at that location, the setback requirement of 100 feet was still enforced, as the overall river remained a viable recreational river.

This lease-purchase occurred within three years of the May 1971 amendment to Crown policy eliminating the acceptance of individual applications for the purchase of Crown land fronting water. It is evident in the correspondence among the Lands Branch personnel that the shift away from individual grants of riparian land towards establishing subdivisions and developments was already under consideration. The application was also considered on the basis of allowing adjacent sites to be developed.

Summary

Both case studies show that in granting fee simple or leasehold interests with an excepted riparian strip, the parcel is an upland parcel with no riparian rights, and with fixed boundaries. The Monashee case provided a judicial interpretation of the *Land Act* exception resulting in the upland boundary of the one chain strip being fixed. In the Dean River study, the side of the parcel fronting on the river was monumented with ties provided to the natural boundary from each corner. It is evident that neither parcel was a riparian parcel.

In terms of the effectiveness of riparian strips in support of sustainability, the Crown grant case studies address only the **access** purpose. The Monashee study shows how legislation provided public access both to and along coastal waters. The Dean River

study shows how policy precluded the dispersal of Crown owned riparian areas into private ownership, thus ensuring public recreational pursuits were maintained through public access, both to and along water. The addition of a clause to the upland lease merely acknowledged the public access to the strip of land. As the strip was not part of the leasehold, the clause cannot be taken as a notice of an easement across or over the leasehold land itself. Rather, the clause must serve the purpose of notification to any that search the title of the public right of access to and along the water on the strip.

References:

[1] Cail, Robert E. 1974. *Land, Man, and the Law* UBC Press, Vancouver. p.2. Some early titles to land on Vancouver Island were granted by the Hudson's Bay Company subject to the authority of the British Crown as granted by the Royal Proclamation of January 13th, 1849. The Company's lands were repossessed in 1858 after it was deemed that insufficient colonization had been achieved. These grants predate British Columbia joining Confederation.

[2] Note 1. p.17. The Ordinance closely resembled the policy written by James Douglas prior to his retirement as Governor of the Colony in 1864. He had openly admitted that his land policy was written with the purpose of increasing the population by encouraging settlement.

[3] Ormsby, Margaret A.1958. *British Columbia: a History* Evergreen Press, Vancouver. pp.185-6.

[4] O.C. 16. 1871.Terms of Union. Article 11

[5] Victoria Colonist. February 20th, 1908. *Amendments to Crown Lands Law*.

[6] Victoria Daily Times. March 1st, 1910. *Premier Aroused by Remark of Brewster's.*

[7] Legislative Assembly of British Columbia. Votes and Proceedings. Nos. 66 and 67. March 24th, 1970.

[8] Williston, Ray. B.C. Minister of Lands and Forest. July 8th, 1958. *Memorandum Re: Alienation of Crown Land Fronting Upon Lakes.*

[9] B.C. Ministry of Lands, Parks and Housing. 1985. *Crown Shoreland Disposition Policy Review.* Land Policy and Analysis Section – Policy Branch. File: 0220395.

[10] B.C. Surveyor General. Circular Letter #227. *10 Chain Lake Shore Reserves*. April 15th, 1971.

[11] Note 9.

[12] Note 9.

[13] Efforts to establish the origin of the access strip included a review of B.C. Land Registry Archives policy documents, and a review of Surveyor General Circular Letters both available at the Office of the Surveyor General. Further, the Annual Reports of the Corporation of Land Surveyors of the Province of British Columbia were reviewed.

[14] Note 9.

[15] B.C. Ministry of Environment, Lands and Parks. *Land Management Manual, Volume 3 – Land Use*. Last amended March 1st, 1994.

[16] Note 15.

[17] There was no discussion of the old riparian strip reservation in the legislature at the time as evidenced by a review of B.C. Legislative Journals and Sessional Papers held in the Legislative Library.

[18] B.C. Crown Land Registry. Letter Patent February 2, 1911.

[19] c.I. Note 15.

[20] B.C. Land Title Office, Victoria. Land Title Number: 146091I

[21] B.C. Land Title Office, Victoria. Land Title Number: 340818I

[22] B.C Land Title Office, Victoria. Land Title Number: G8649

[23] *Monashee Enterprises Ltd v. Minister of Recreation and Conservation (B.C.),* (1978) 7 R.P.R. 197 (B.C.S.C.)

[24] B.C. Land Title Office, Victoria. Land Title Number: G78478

[25] Note 19. p.188.

[26] Baldwin, A.J. 1997. *Access To And Along Water Margins: The Queen's Chain Myth*. Masters of Surveying Thesis. University of Otago. New Zealand has establishd ambulatory esplanade strips and access strips on riparian land in private subdivision.
[27] B.C. Crown Land Registry Archives. File No. 0276893. p. 6. Form H application under the Land Act.
[28] Note 27. pp. 27-28. Land Classification Report submitted by P.H. Downs, Deputy Land Inspector.
[29] Note 27. p. 30. Correspondence from L.D. Fraser, Chief Land Inspector to P.H. Downs, Land Inspector.
[30] Note 27. pp. 37-38. Correspondence from D. Borthwick, Director of Lands to William Clark.
[31] Note 27. p. 43. Correspondence from L.D. Fraser, Chief Land Inspector to P.H. Downs, Land Inspector.
[32] Note 27. p. 48. Correspondence from A.F. Smith, Assistant Chief Land Inspector to F.M. Cunningham, Assistant Director of Lands.
[33] Note 27. p. 49. File Memorandum.
[34] Note 27. pp. 55-56. Correspondence from W.R. Redel, Director of Lands to William Clark.
[35] Note 27. p. 85. Plan of Survey completed by Thomas Williams, B.C.L.S.

IV. SUBDIVISION

If an owner of a large parcel of land wishes to subdivide in order to gain value from the land, then public policy and regulation regarding riparian areas within the subdivided land can be used to achieve sustainability goals. This chapter discusses how the subdivision and transfer of land process in British Columbia is used to establish riparian strips of land for conservation, economic and access purposes.

Provincial Legislation

Within the *Land Title Act* (LTA), [1] Part 7 – Divisions 2, 3, 4 and 5 deal directly with the subdivision of land. More specifically, sections 75 and 82, along with 219 (from Part 14 – Division 4) are relevant to the subdivision of riparian land.

Section 75 sets out the requirements for the subdivision of land. It provides the closest description of a riparian strip within the Act when stating access requirements in subsection (1)(c):

> If the land subdivided borders on
>
> (i) a body of water, the bed of which is owned by the Crown,
>
> (ii) the boundary of a strip of land established as the boundary of a water reservoir, where the strip of land and reservoir are owned by the Crown, or
>
> (iii) a strip of Crown land 20 m or less in width contiguous to a natural boundary as defined in the *Land Act*,
>
> access must be given by highways 20 m wide to the body of water and to the strips at distances not greater than 200 m between centre lines, or, in a rural area where the parcels into which the land is subdivided all exceed 0.5 ha, at distances not greater than 400 m between centre lines.

Section 1(d) sets out identical requirements for land that borders on bodies of waters, the beds of which are owned by a person other than the Crown. In both, the riparian strip of land in question refers to a pre-existing strip created by some other means, and does not enable the municipality any authority in creating new riparian strips. It is important to make this distinction. These provisions merely provide the authority for requiring access to riparian strips, if the strips exist.

Section 82 deals with floodplain areas and provides the Minister of Environment, Lands and Parks with authority over approvals of subdivisions in these areas. Under subsection (3) the Minister:

> May, for the purpose of minimizing potential damage that could be caused by flooding, establish conditions … including … that the owner of land being subdivided enter into one or more covenants under section 219 in respect of the parcels that are being created by the subdivision.

Subsection (4) goes on to state that the conditions set under subsection (3) may be different for different floodplain areas, or even for different areas within a particular floodplain.

Section 219, subsection (2) provides the extent to which the covenants may require, restrict or prevent the use, development or subdivision of the land on which the covenant is held. However, section 219 covenants are not limited to floodplain lands. A covenant under subsection (4)(b) can also be used in either a positive (so as to require an action) or negative (so as to exclude some action) manner, and may include one or more of the following provisions:

> That land or a specified amenity in relation to it be protected, preserved, conserved, maintained, enhanced, restored or kept in its natural or existing state in accordance with the covenant and to the extent provided in the covenant.

Amenity, as used here, may include such things as plant life, environmental, wildlife, historical or natural value that relates to the land referred to in the covenant.

The LTA provides means for the province or municipalities to require riparian strips, but falls short of requiring that strips be created. The Minister of Environment, Lands and Parks does have authority to require strips in floodplain areas, but there is no mandate that these strips take any form other than a covenant on title.

Most requirements of subdivision are imposed by municipal jurisdictions. The *Local Government Act* [2] provides in Part 26 – Division 2 that municipalities may create Official Community Plans (OCP). These Plans provide:

> A general statement of the broad objectives and policies of the local government respecting the form and character of existing and proposed land use and servicing requirements in the area covered by the plan. [3]

Section 878(d) also allows that community plans may include policy statements "relating to the preservation, protection, restoration and enhancement of the natural environment, its ecosystems and biological diversity." The inclusion of these policies can have direct bearing on subdivision requirements within a community.

Division 11 states the requirements that owners of land must meet when subdividing land and the provisions for works and services that local governments may invoke through bylaw. There are no direct references within this Division regarding riparian strips or land. However, section 941 does make provision for the setting aside of park land upon subdivision. Subsection (1) allows the land owner the option of paying a cash equivalent. Yet, section 941(2) states that if there is an OCP containing policy statements respecting future parks, the local government may stipulate that the owner of land must provide park land or the cash equivalent. Subsection (4) limits the amount of land that must be surrendered without compensation as 5% of the land being proposed for subdivision. Prior to its repeal on January 27th, 2000, section 942(6) allowed this percentage to be increased to 10% if there was no requirement by the local government respecting the setting aside of land for school sites. [4]

There is a limitation on municipalities using this technique to gain control of riparian strips. For subdivisions that create fewer than three additional lots, or for new lots that exceed two hectares in size, the requirement for setting aside park land does not apply (section 941(5)). Nonetheless, barring these exceptions, municipalities may use the park land provisions of the *Local Government Act* to achieve any policy commitments set out in their OCP respecting riparian areas.

A final section of the *Local Government Act* that provides municipalities a means for obtaining riparian land is section 539. Subsection (1) states that a municipal "Council may enter into an agreement with an owner of land for reserving any part of the land for highway purposes, including the condition that the land reserved must remain unencumbered by buildings or structures." Subsection (2) requires that an agreement

created in this manner "has the effect of a restrictive covenant running with the land and must be registered in the land title office by the municipality."

It is evident by this review of the provincial legislation that while the subdivision and transfer of land can be a trigger for establishing riparian strips, the legislation is merely enabling, and not prescriptive. The *Local Government Act* allows the local governments to take a measure of control in dealing with these issues through subordinate legislation.

The following section examines the subordinate legislation that has been adopted under the authority of the *Local Government Act* within Nanaimo, North Vancouver and West Vancouver. Within each jurisdiction, a case study will be used to investigate the approaches taken by municipalities in subdivisions involving riparian areas.

Nanaimo

Concern regarding natural areas remains at the forefront within the municipality and is an issue that is specifically addressed in its OCP. [5] Riparian areas factor considerably into two of the goals set out in the OCP involving natural areas – building viable communities and protecting the environment. Section One outlines the goal of building complete, viable communities, by giving (among other things) "priority to marine related uses and public access along the waterfront." [6] Detailed subsections follow that give objectives and policies for Parks and Open Space and for the Waterfront with a focus on providing public accessibility.

Specific objectives in the Parks and Open Space section include providing recreational access and use of natural areas. Policies give direction in acquiring park land where it "provides access to waterfront lands, including the sea, lakes and watercourses [or] contains significant natural features … such as environmentally sensitive areas retained in a natural, undisturbed state." [7] The priority is to keep these waterfront areas in public hands for the benefit of all. Acquisition methods outlined include dedication of land upon subdivision, allowing developers increased density bonuses through rezoning of the remaining parcel upon dedication of the waterfront area, the outright purchase of park

land, and encouragement of donations and bequests of privately owned lands that support park land objectives. [8]

The Waterfront – both marine and freshwater – is recognized as an important resource in Nanaimo for its environmental significance, recreation and tourism value. Objectives relating directly to the Waterfront include increasing public waterfront access, creating a Waterfront Trailway for bicycle and pedestrian use from Departure Bay Beach to the Nanaimo River Estuary to the south, and protecting habitat. [9]

Public access to the waterfront policy stipulates that the City encourages the Approving Officer to exercise the authority granted under the *Land Title Act* (s. 75) to provide access ways with a minimum width of 20 metres every 200 metres along the water. Further, the City seeks to obtain public access along the waterfront via a road dedication as part of subdivision or rezoning applications. If dedication is not an option, as in a building or development permit application, then the City will attempt to obtain Right of Way agreements for public access to and along the waterfront from the landowners. [10]

Specific to the waterfront from Departure Bay Beach to the Nanaimo Downtown, the OCP outlines the planned construction of the Nanaimo Harbour Waterfront Trailway for bicycles and pedestrians. The City will confer with the Ministry of Environment, Lands and Parks and the Department of Fisheries and Oceans in finding the least obtrusive construction methods for sensitive foreshore areas for this project. As well, the City will negotiate with existing landowners along the waterfront for the necessary agreements and rights-of-way. Future plans call for a southern extension of the trailway to the Nanaimo River Estuary. [11]

The protection of the environment is the second major goal provided for in the OCP and is the focus of Section Two. It defines this goal as "looking after Nanaimo's natural diversity and ecosystems in the course of land use and development." [12] Objectives and policies for the preservation of environmentally sensitive areas and the protection of life and property from natural hazard areas are detailed within this section.

Environmentally sensitive areas (ESA) include areas that provide productive fish habitat and may be watersheds, watercourses, or marine foreshore areas. The City has several

measures at its disposal in protecting ESA, including dedication as a City park or trailway if compatible with the goals and objectives outlined for such a use; dedication to a private land trust (e.g. Nature Conservancy of Canada) for conservation purposes; covenant for conservation purposes with the City, the Province or a non-governmental organization (NGO) eligible to hold conservation covenants; and/or the use of density bonusing for developments that facilitate the conservation of significant portions of ESA. [13]

Respecting riparian areas specifically, watercourses and their leave strips are identified as ESA that require a Development Permit (DP) to be obtained prior to development or subdivision activity. The OCP defines Development Permit Area 23 as all watercourse areas as follows:

- For the Millstone and Nanaimo Rivers, as shown on Schedule B, all area between the centre of the river and a perpendicular line inland 30 metres from the top of bank on both sides.
- For other creeks and streams shown on Schedule B, all area between the centre of the creek/stream and a perpendicular line inland 15 metres from the top of bank on both sides.
- For small creeks and streams shown on Schedule B, all area between the centre of the creek/stream and a perpendicular line inland 7.5 metres from the top of bank on both sides.
- For lakes, ponds, and wetlands shown on Schedule B, the bed and area between the water's edge and a perpendicular line inland 15 metres from the wetland boundary on all sides.
- For the sea or ocean, all area between the water's edge and a perpendicular line inland 15 metres from the natural boundary. [14]

The areas of upland adjacent to the watercourse so defined are termed leave strips. Given their roles as natural water storage, drainage and purifying systems, leave strips need to remain in a largely undisturbed state in order to provide habitat protection, flood prevention and erosion control. [15]

Nanaimo provides explicit definition for establishing leave strips in its OCP. It references the Zoning Bylaw No. 4000 for definitions of "top of bank," "wetland boundary" and "natural boundary" from which the leave strips are measured.

"Top of bank" means:

> The points closest to the natural boundary of a watercourse where a break in the slope of the land occurs such that the grade beyond the break is flatter than 3:1 for a minimum of 15 metres (49.2 feet) measured perpendicularly from the watercourse. [16]

"Wetland boundary" is defined as:

> The high water mark or water level in wetlands, ponds and lakes that is reached during annual winter flood events, as indicated by the presence of soil subject to regular inundation and/or vegetation that is typically adapted for life in submerged, semi-submerged, or saturated soil conditions. [17]

"Natural boundary" is defined as:

> The visible high water mark of any lake, river, stream or other body of water where the presence and action of the water are so common and usual, and so long continued in all ordinary years, as to mark on the soil of the bed of the body of water a character distinct from that of its banks, in vegetation, as well as in the nature of the soil itself. [18]

The Zoning Bylaw No. 4000 [19] and the Subdivision Control Bylaw No. 3260 [20] have definitions for establishing leave strips of 7.5 metres adjacent to a standard dyke right-of-way or structure for flood control measured from any flood protection structure. The Subdivision Control Bylaw requires that an owner identify on the land to be subdivided the top of bank and the extent of the leave strip with flagging, tape or stakes to the Approving Officer's satisfaction. Prior to entering the land to begin work in the subdivision – such as tree removal, land clearing and site preparation – the owner must erect a highly visible temporary fence along the leave strip boundary at its furthest extent from the watercourse. The fence is not to be removed until the construction or disturbance of the land is completed. [21]

The Zoning Bylaw stipulates that "no building, structure, road, parking lot, driveway, patio, games court, or other impermeable surface shall be located within a leave strip." [22] The Zoning Bylaw also states flood control requirements respecting construction near watercourses. Regulations indicate the flood construction level – the minimum elevation above the natural boundary that floor systems may be established for the various watercourses in the municipality. If fill is used in construction to meet the minimum elevations, none of the fill can encroach upon the leave strip. [23]

The Zoning Bylaw deals with discrepancies in locating the topographic features that define the interface between wet and dry such as the natural boundary, wetland boundary, top of bank, flood construction level, or the boundary of a leave strip. When the location of a watercourse identified in the Schedule differs from that found on the ground as determined by a BCLS, then the location on the ground will serve for establishing the leave strip. [24] However, if the location of the topographic feature cannot be verified to the satisfaction of the Director of Development Services, then the applicant must submit a site plan certified by both a BCLS and a professional biologist that identifies the true location. [25]

Avonlea Case Study

Description:

The property investigated is a proposed 87-lot subdivision. The current legal description for the land to be subdivided is: Part of Lot 1, Plan VIP64334 and Lot 2, Plan VIP64334. The property is situated along Jingle Pot Road with a section of Beaver Creek passing through it running in a southernly direction (Figure 5).

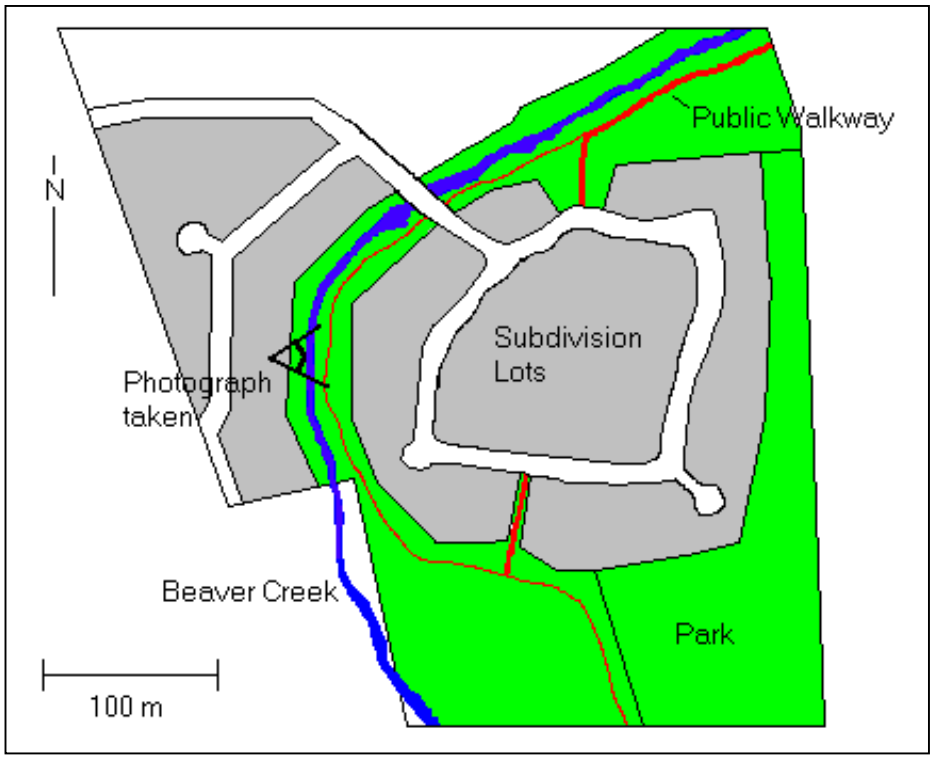

Figure 5 – Avonlea Subdivision

Chronology:

November 7th, 1996: The subdivision survey of Lot 3 Plan 26387 and the remainder of Lot A Plan 18083, section 20, Range 4, Mountain District was completed by B. Williamson, BCLS creating Lots 1 and 2, Plan VIP64334.

May 21st, 1997: Site Plan documents were submitted to Development Services, City of Nanaimo. The Site Plan provided for an 87-lot subdivision with a minimum 15 metre setback for the proposed lots from the top of bank along Beaver Creek as required by the development guidelines. The strip created along either side of Beaver Creek ranged from 15 to 28 metres in width and was to be dedicated to the municipality upon subdivision of the lots. A pathway along the eastern side of Beaver Creek within the riparian area was indicated on the plan that would tie in with the existing public pathway system. It was located no closer than five metres to the creek and was to be as far as 20 metres from it in places.

Figure 6 – Avonlea Dedication

Due to a downturn in the local economy, the proposed subdivision was halted following the preliminary planning of the road system and lot boundaries. Prior to discontinuing the development, the leave strip boundary along both sides of the watercourse was indicated on the ground with the erection of bright orange fencing as required by the Subdivision Control Bylaw (Figure 6). As the Bylaw required that the fence was not to be removed until the construction or disturbance of the land was completed, the fence remained onsite

awaiting further development to proceed. There was no evidence of the proposed public walkway along the dedicated portion of the riparian area.

Despite the lack of progress in subdividing the parcel for development, it demonstrates the application of Nanaimo's OCP and bylaws respecting its riparian areas. Beaver Creek has been assigned the designation of major stream, and therefore requires a 15 metre setback according to the OCP. The site plan shows that the portion of the subdivision along Beaver Creek that was to be dedicated meets this minimum requirement. Further, while protection of the environment is one of the primary goals with respect to riparian areas, providing access to these zones is also a focus of the OCP. This proposed subdivision development was to address access by providing a pathway along the eastern side of the creek that would tie into the major pathway system provided by the city.

The incomplete nature of the project precludes any firm assessment of the effectiveness of meeting both criteria of conservation and access. Considering both the degree of setback for the public pathway – a minimum of five metres from the Creek within the riparian strip – and the fact that it would not intersect the creek at any point along its length, this development would meet the requirements of conserving the fish habitat and providing public access along the waterway.

District of North Vancouver

The District of North Vancouver is located along Burrard Inlet and Indian Arm. The District recognizes the role of these inlets as part of the Vancouver Port Authority (VPA) harbour in its OCP, and further identifies its relative location to the rest of the Vancouver Metropolitan Area as an important factor in its future as a residential community. The OCP states as its primary goals a desire "to develop an attractive community in harmony with nature" that "meets the changing needs of District residents" and "encourage[s] a strong local economy with expanded opportunities for employment." [26]

The OCP makes several references to riparian areas in its policies. The purpose of the Natural Environment section is to "conserve and protect the watercourses, lakes and

foreshore environments,"[27] while striving "to create and preserve public access to environmentally non-sensitive natural areas."[28] Policy dictates that development within areas subject to flooding must also meet appropriate land use and development permit regulations as created by the municipality. [29]

The Parks and Recreation section contains a significant portion of the municipality's position on dealings with riparian areas. The District contains civic parks in its urban areas for recreation purposes such as tennis courts and ball fields, while District parks provide a separate role in conserving the natural areas of North Vancouver. Future emphasis is to be placed on expanding the parks systems, increasing waterfront access and improving pathway and trail systems. Municipally owned natural areas are to be included and protected within the parks system. Linear park trails are to be created along major rivers and creeks from the mountains to the sea. Additionally, an east-west waterfront trail corridor is to be established in conjunction with other jurisdictions from Horseshoe Bay to Deep Cove. [30] A portion of this trail will follow along the north shore of Burrard Inlet. The OCP calls for a long-term program with the VPA to facilitate the creation of the waterfront access to the harbour through "the provision of public viewpoints, seawalks, and parks." [31]

The most significant bylaw relating to riparian areas is the Environmental Protection and Preservation (EPP) Bylaw. [32] Part A – Aquatic Areas of the bylaw applies to stream corridors, the waterfront and wetlands. A stream corridor is defined as the area of land between the tops of bank of a stream and includes a strip of land above the top of bank on either side of the stream. The strip of land is to be 30 metres in width for streams designated by the municipality as Fish Bearing Streams and 15 metres for non-fish-bearing streams. Top of Bank is given the same meaning as that set out in the *Land Development Guidelines* published by the Ministry of Environment, Lands and Parks and the Department of Fisheries and Oceans. [33] Essentially, this is the point of highest water level during the mean annual flood event for the stream. For streams with steep banks, the top of bank should be located at the first significant break, which may occur well above the ordinary water level.

For tidal parcels, waterfront is defined as the land lying inland 30 metres from the natural boundary in Burrard Inlet and Indian Arm. The natural boundary is the visible high water mark where the action of the ocean water is "so common and usual, and so long continued in all ordinary years, as to mark the soil of the bed of the body of water a character distinct from that of its banks, in vegetation or in the nature of the soil itself." [34] Similarly, a 30 metre strip of land beyond the boundaries of swamps, marshes, bogs, and other standing water areas, is deemed to be included in the term wetland.

In each of these areas – stream corridors, waterfront and wetlands – the *Land Development Guidelines* apply and no person may do any work without, or contrary to, a Permit issued by the municipality. All the requirements set out in the EPP bylaw are directed at development and the use of land within riparian areas. However, there are no stipulations that this land must be dedicated to the municipality and there is no direct mention of subdivision procedures relating to riparian land.

The Subdivision Control Bylaw [35] makes two references to riparian areas. Section 28(j) requires that for subdivided land that "borders on the shore of any navigable water, access shall be given by sufficient public highways to such navigable water at distances not greater than 200 metres between centre lines." This expresses the same intent of section 75 (1)(c) of the *Land Title Act* and only provides for access to the water or pre-existing strips, if they exist. However, section 34 of the bylaw provides that:

> Where a subdivision contains or is bordered by a natural watercourse, the Approving Officer may require that access be provided to the bed of the watercourse by means of a 7-metre easement parallel to the top of each bank and each lot shall comply with minimum lot size requirements on one side of such watercourse, exclusive of the bed of the stream and such 7-metre access easements.

The purpose of this section is to provide District personnel access to maintain the stream corridors within the subdivision. Moreover, it is intended solely for stream corridors; there has been no attempt to apply it to waterfront subdivisions. [36]

On July 19, 1999 a Citizens Task Force presented a report on the future of the North Vancouver waterfront. The Interim Report outlines a 50-year plan to provide greater public accessibility to the waterfront in the District. It includes opening up all street ends

that lead to the beach; building a boardwalk along the south side of Deep Cove; replacing private docks with communal docks; removing encroachments below high tide; better protecting marine habitat and developing a new terminal viewpoint at the east end of the proposed trail system at the north end of Deep Cove. [37] Of particular interest in this discussion is the proposed creation of the boardwalk along the south side of Deep Cove.

Deep Cove Case Study

Description: The property investigated is a consolidation of several lots. The current legal description is: Lot B, District Lot 575, Group One, New Westminster District, Plan LMP 22731. The property is situated along the south side of Deep Cove and is located at 4750 Eastridge Road. Lying north of this lot is Block B, a long narrow strip of land lying along the southern shoreline of Deep Cove, part of Indian Arm (Figure 7).

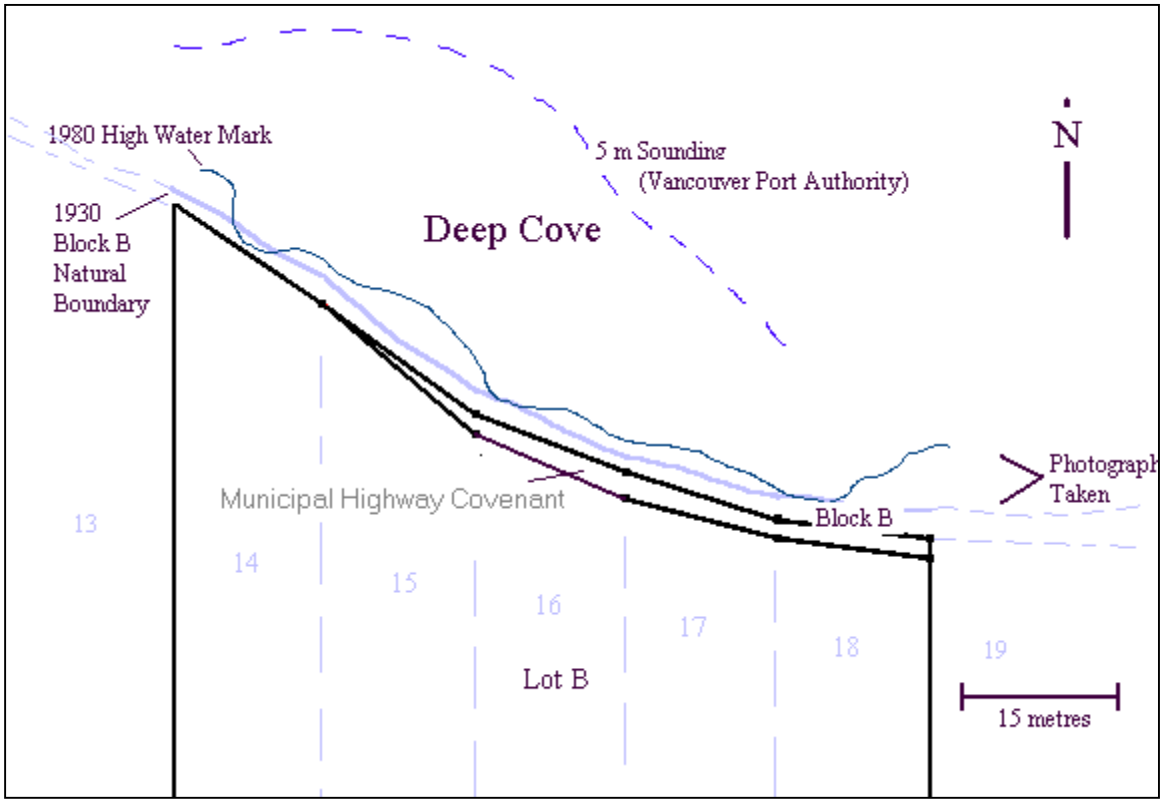

Figure 7 – Lot B Municipal Highway Covenant

Chronology:

September 8, 1928: The Corporation of the District of North Vancouver purchases Parcel A, District Lot 575 in Group One, New Westminster District as a result of a tax sale. [38]

June 20, 1930: The subdivision survey of Parcel A, District Lot 575 in Group One, New Westminster District was completed by A. Holland, BCLS. Block B was shown as a strip of land along the waterfront of Deep Cove with the upland boundary being posted for the 21-lot subdivision by placement of wooden posts at each corner of the new lots. The depth of Block B was indicated on the plan at each wooden post and ranged from 2.0 to 10.0 feet. Block B bound each parcel in the 21-lot subdivision to the north and therefore, according to this plan, meant that these parcels were not riparian. [39]

August 23, 1930: Title was created for Block B of District Lot 575 with the Corporation of the District of North Vancouver as registered owner. [40] The original intent for the creation of the Block B strip was likely to provide access from the water for the logging industry. [41]

1960s: District of North Vancouver considered Block B as a public pathway [42] and reference has been made to it as a residential park on undated District planning drawings.[43]

August 27, 1980: Block B was resurveyed and significant discrepancies were found between the Present High Water Mark (HWM) and that indicated on Plan 6241. For parcels 14 through 18 (future Lot B), the Present HWM was for the most part below that indicated on the original Plan. Fill was noted in several sections. In Lot 14, the Present HWM encroached into Block B as described on the original Plan. Due to the rugged nature of the area, it was unlikely that erosion had occurred. It was most likely that the present HWM was in the same location as it was at the time of original subdivision. Therefore, the Block B width was diminished in this portion as the District never had authority over land below the natural boundary. Perhaps of greater significance, the Present HWM encroached into the monumented boundaries of the upland parcels at two places elsewhere along Block B. At these points, the Block B strip was discontinuous. [44]

September 9, 1987: Re-subdivision of former Lots 15 through 18 created four new parcels surveyed by J. N. Bennett, BCLS. Three of the new parcels were shortened portions of former Lots 15 through 17 with the Eastridge Road frontages remaining the same. The remaining lower sections of each of these were added to the former Lot 18 creating a larger Lot 11 on the new plan. Road access for this new lot was maintained through the upper portion of the former Lot 18. In completing the re-subdivision, the District negotiated a covenant pursuant to Section 215 of the LTA 1979 (Section 219 of the current Act) that required the developer to enter into an agreement with the District. [45] The agreement allowed that a portion of the parcel adjacent to Block B be reserved for highway purposes. [46]

April 20, 1995: Lot 14 of the original subdivision was subdivided by adding the lower portion to Lot 11 created in September 1987. The new parcel was designated Lot B and no new reservation was made along the portion of Block B in the former Lot 14. The 1987 covenant for the highway reservation remained on the title. [47]

This case study exhibits how creating riparian strips has served a shifting purpose. In the late 1920s and early 1930s, the logging industry required that suitable locations be found for mooring logs. In 1918, the Deep Cove Lumber Company constructed a logging road that was used for the next eight years to deliver logs to the cove where they were rolled into the water and boomed. [48] Deep Cove provided a relatively sheltered location suitable for this purpose and is substantiated by recollections of a long-time resident (Figure 8). [49] Yet, due to its proximity to Vancouver, it was a prime location for

Figure 8 – Deep Cove Log booms early 1900s (Source: Deep Cove Historical Society)

cottages.[50] The original subdivision satisfied both these needs. At the time of subdivision, the Block B strip was retained by the District of North Vancouver. More recently, the District has endeavoured to establish a public pathway along the waterfront. One of the means of achieving this has been to covenant the parcels for future establishment of a highway along a portion of Block B on re-subdivision. The retention of the Block B strip remains despite a shift in its purpose – from originally providing commercial access from the water for logging to its present use as a public pathway along the water.

A question raised from the study involves the nature of Block B. Was the original plan intended to accurately depict Block B in its entirety? Or was the purpose of the original plan to delineate the subdivision properties and thus establish Block B's upland boundary without an attempt at accurately determining the location of the natural boundary? Minimum distances of two feet were marked for the width of Block B at lot corners. Yet no indication was made on the plan that the natural boundary was measured as the High Water Mark. Clearly, at the time of subdivision, Block B consisted of all upland lying between the posted boundary along the subdivided lots and the natural boundary.

The character of the area is quite rugged, consisting mostly of rocky foreshore, which precludes accretion or erosion (Figure 9). Therefore, the natural boundary found today

Figure 9 – Deep Cove Block B Reservation

probably reflects the natural boundary at the time of original subdivision. For the majority of the strip, the upland boundary of Block B is not in question. It was suitably demarcated with posts at time of survey. However, at those points where the natural boundary is now found to encroach into the upland parcels, it could be argued that the upland parcels have some riparian status. At these points, Block B is discontinuous. At those other points where the present natural boundary encroaches into Block B as recorded in the original plan, it is narrower. The original boundary location as described by the subdivision plan must be considered suspect with respect to Block B and any effort to construct a public pathway based on this plan should proceed with caution.

District of West Vancouver

Due to the topography of the District of West Vancouver, the municipality's Council has developed an OCP that aims "to maintain the park-like residential character of West Vancouver through policies of controlled growth and no heavy industry." [51] The District of West Vancouver is a community that is confined by the sea to the south and west and rises quickly to mountains in the north. The majority of residential land lies in established neighbourhoods lying below the Upper Levels Highway, and in newer neighbourhoods lying above it.

There remains approximately 1100 acres of undeveloped land in the District, of which only about a third is usable. Of this land, 92% remains with British Properties, the builders of the Lions Gate Bridge just before the Second World War. The OCP requires developing areas to obtain Development Permits to proceed. A 1991 amendment to the OCP defined all Established Neighbourhoods as Development Permit Areas as well. [52]

The relatively steep topography means that the creeks in the community are "a principal destination for storm water runoff and can become a serious hazard to adjacent lands at times of peak flows." [53] Section 3.3 of the OCP discusses creeks and drainage policies in detail; flood control, creek preservation and drainage control are priority objectives in new developing neighbourhoods.

In an effort to deal with flood concerns and to protect the natural environment, municipally controlled creek preservation areas were created for the significant creeks in the late 1970s. Under the current OCP a Creek Preservation Area (CPA) is:

> Intended to include the established 100 year flood line of the creek, plus an additional strip of land on or beyond each bank which the municipality considers to be subject to hazardous conditions, to be directly associated with the creek environment and particularly sensitive to any potential adjacent development, or otherwise to be an integral part of the creek corridor. [54]

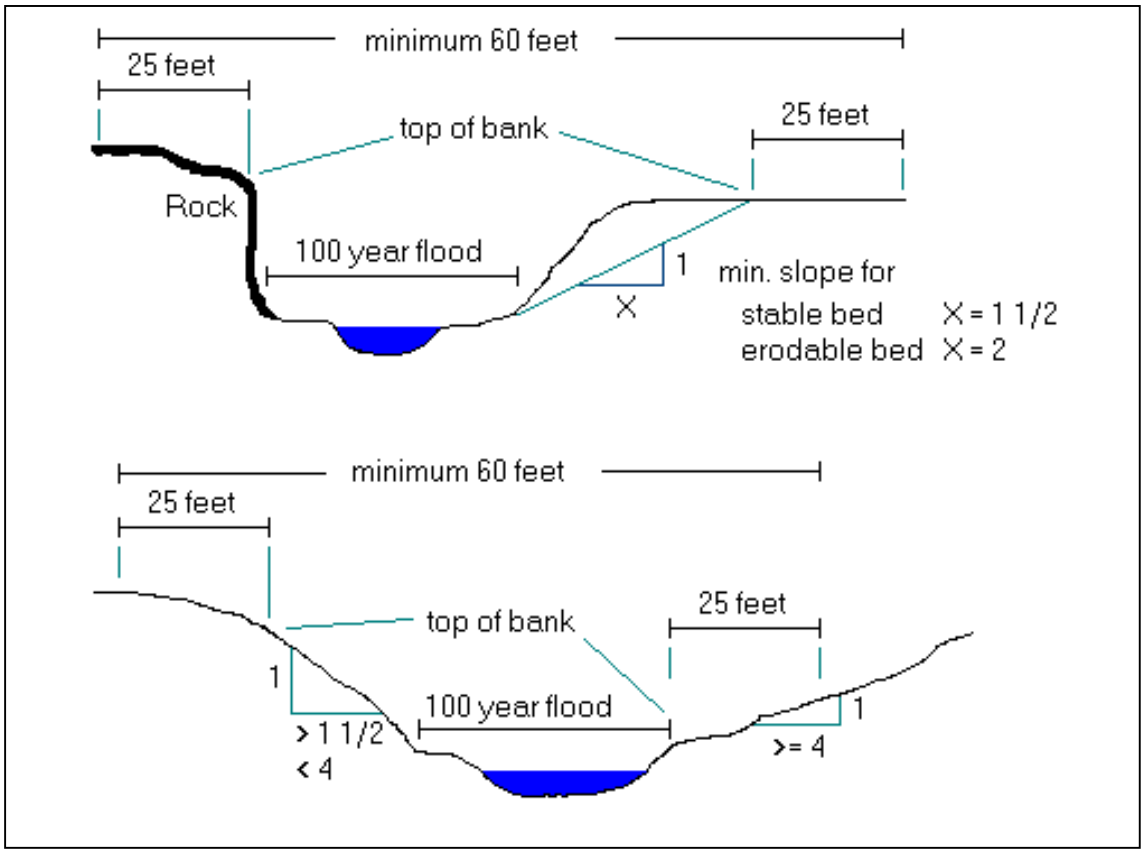

Figure 10 – Creek Protection Area Definition (adapted from W.V, Creeks Bylaw)

Reference is made in the OCP to the West Vancouver Creeks Bylaw [55] that established a Creek Protection Area. This area is the minimum consideration in new subdivisions for CPAs. The Creek Protection Area (the Area) is defined as the land within twenty-five feet of the top-of-bank of any creek. In turn, the top-of-bank consists of the point at the top of a stable slope (Figure 10).

Council has also set out in the OCP several policy statements respecting CPAs. With respect to fish habitat, it will cooperate with Federal Government and Provincial Government with policies and programmes to protect salmon spawning creeks. The development potential and design of lots abutting a Creek Protection Area (the Area) are to be appropriate whether the Area is publicly or privately held. No new development is to be permitted within CPAs except for that which is deemed to be unavoidable or publicly necessary, such as pathway and creek restoration or protection measures. For existing lots in older established neighbourhoods where CPAs have not been registered, activities that would impair drainage conditions of a creek are prohibited. [56]

In addition to the Area established under the OCP, West Vancouver also requires a Creek Setback Area under the Zoning Bylaw. [57] A Creek Setback of ten feet is required on all lots created since 1996 and consists of the distance between the Creek Preservation Area and the building line. This area will "be unoccupied and unobstructed by buildings, structures, swimming pools, or parts thereof." This development issue must be considered in the subdivision process by the developer when considering the footprints of buildings on the subdivided land.

Gordon Place Case Study

Description: The property was undeveloped land in an established neighbourhood and is 1.92 hectares in area. The legal description is: Southeast 1/4 of District Lot 1044, Group One, New Westminster District. Brothers Creek runs along the northern portion of the property in an easterly direction and then arcs back to cross the southeastern corner of the subdivision (Figure 11).

Chronology:

April 3, 1995: The geotechnical report to the developer indicated that the top of bank shown on the survey plan was not a sharp abrupt break, but a rounded mature feature. This feature in conjunction with an ample margin of safety of the slope indicated that the proposed use of individual lots 1, 2 and 3 may approach and straddle the feature without compromising the slope stability. [58]

May 15, 1995: The preliminary plan was submitted to District Approving Officer for evaluation. [59]

May 21, 1995: The Department of Fisheries and Oceans (DFO) advised that a 15 m leave strip from top of bank should be left in an undisturbed natural state along Brother's Creek. No dumping, landfill or vegetation removal should be permitted in this Fisheries Sensitive Zone (FSZ). Furthermore, the FSZ should be protected by Restrictive Covenants (under the *Local Government Act*, section 219) and registered against the titles. Alternatively, DFO endorsed the option of acquiring all or part of this area as Park Land. [60]

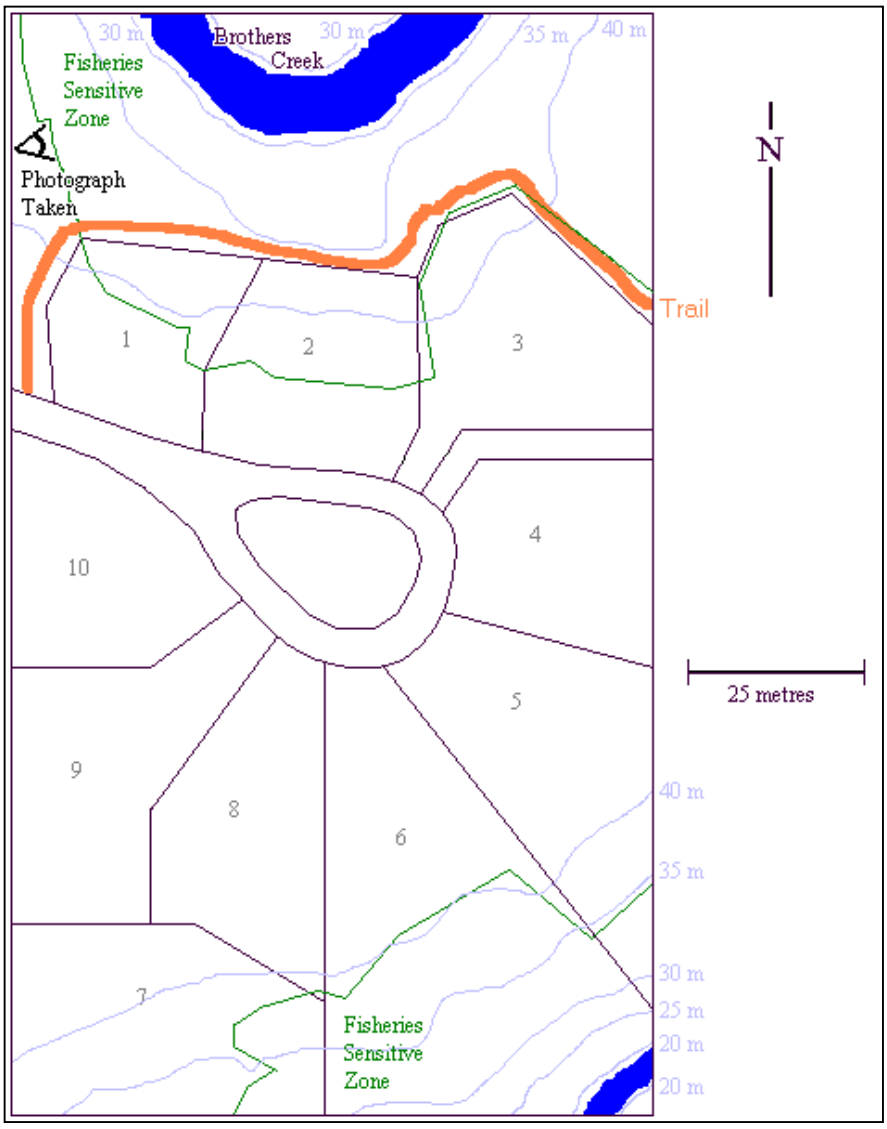

Figure 11 – Gordon Place Subdivision

May 25, 1995: The Approving Officer for the District indicated that there would be no reason not to approve the proposed eleven lot subdivision plan as it met the subdivision and zoning bylaws of the District and the *Land Title Act* requirements. [61]

June 7, 1995: Carrington Projects Ltd made a formal Development Permit Application (DPA) to develop the property with eleven lots. The application kept the number of lots at eleven but modified the configuration. Retaining open space and minimizing impact on existing terrain, vegetation and fish habitat were major elements of the concept plan. Dedicated park land was proposed at 1.02 acres or approximately 21% of the site. The dedication to the municipality would include the trail, lands between the trail and the northern portion of Brothers Creek, the creek, and the land on the other side of the creek. No mention of the creek and its surrounding area in the southeastern portion of the site was made in the dedication. This portion of the creek was included in lots 5 and 6. [62]

June 30, 1995: The municipality had the option to take park land dedication or cash-in-lieu as provided for in section 941 (2) of the *Local Government Act*. The Zoning & Development Planner recommended to the Municipal Manager that the northern creek area of Brothers Creek be accepted as a dedication. [63]

August 21, 1995: The Planning Consultant for the Developer presented the municipality with options for DPA modifications reducing the number of lots to ten and re-introduced the option of cash-in-lieu instead of park land. [64]

September - October, 1995: The Parks Department expressed a preference for park land dedication of the creek area for public use of the trail and protection of habitat as recommended by the DFO. [65]

October 23, 1995: Council approved the Concept Plan 1 including Creek Preservation and Tree Protection Areas. This approval meant that the number of lots was not to exceed ten, the setbacks for principal dwellings would be met, protection of vegetation within the Creek Preservation Area was required, a public park was to be dedicated to the Municipality at the time of subdivision approval, and a trail and a pedestrian path would be constructed within the public park to the satisfaction of the Director of Parks and Recreation and paid for by the owner. The trail was designed to be 15 to 25 metres from the Creek. Development Permit 95-09 was issued. [66]

November 20, 1995: Receipt of the DP was acknowledged by the developer and the development proceeded. [67]

Figure 12 – Brothers Creek Dedication

April 10, 1996: The developer granted to the District of West Vancouver a restrictive covenant (section 215 of the *Land Title Act* R.S.B.C. 1979, c.219) over portions of Lots 1, 2, 5, 6, 7 and 8 that are referred to as the "Creek Protection Area." The area equates to the portion of the Fisheries Sensitive Zone that lies within each of the parcels (refer to Figure 10). The covenant states that no buildings, structures or works can be constructed or placed and that no trees, bushes or natural ground cover may be disturbed or removed in the Creek Protection Area.

This subdivision development provided an excellent example of how a riparian strip can be created in British Columbia for the purpose of sustainability (Figure 12). The provincial legislation enabled the local authority to serve the community's best interests, through their OCP and bylaws. The combination of difficult terrain and the fish bearing capacity of many of the watercourses in the District require that more substantial measures be adopted in protecting these areas. The municipality takes the view that a larger dedication better serves the land by holding it in public ownership. [68] For this development, approximately 21% of the site to be subdivided was dedicated to the Municipality, an amount twice the *Local Government Act* requirement of the time and four times the current amount required. Maintaining the Creek in its natural state was

considered a benefit to the development, although the result was a dedication in excess of that required. Furthermore, the Municipality required Creek setbacks of 10 feet beyond the limits of the Creek Protection Area.

In the District of West Vancouver, the dedication of riparian strips is the preferred method for sustaining riparian habitat. Working with the OCP, and the Creeks and Zoning Bylaws, the District stipulates that creeks within the Municipality must be protected (Creek Protection Areas and Creek Preservation Areas). The purposes are to provide flood protection and sufficient drainage, and to protect sensitive fish habitat and the overall natural environment.

The case study shows how the conservation and economic aspects of sustainability are addressed by maintaining the natural character of the creek. Further, it also addresses the public access component of sustainability. Within the dedication of the northern portion of the creek, a trail was preserved along the water – at a minimum distance of 15 metres away – without providing access directly to the water. This allows continued enjoyment of the riparian environment by local residents. In this case, the bylaws and negotiation allowed all three purposes of sustainability to be achieved.

Summary

The West Vancouver study shows how an OCP may be used to require the dedication of a riparian strip as parkland. Even though there is no legal means to demand that greater than 5% be dedicated, the study demonstrated how negotiation respecting dedication could prove beneficial. The Department of Fisheries and Oceans also recommended that Restrictive Covenants be placed on title to protect the Fisheries Sensitive Zone. For those portions of the subdivision that could not be included in a dedication, the municipality followed this recommendation. The use of dedication attempted to meet all three purposes of sustainability. It prevented development within the portion of the creek prone to flooding, it conserved the creek in its present natural state with only the pre-existing trail being enhanced within the riparian strip, and it allowed access along the creek to be preserved via the trail. The only aspect of sustainability that was not provided for was access directly to the water. When the mechanism is limited to a restrictive

covenant, the municipality could only discourage harmful activity that would allow it to conserve the riparian environment and prevent development that would be susceptible to flooding. The municipality could not provide public access via this mechanism.

When the subdivision of a parcel does not meet the requirements for parkland dedication, the North Vancouver study offers an alternative for the express purpose of public accessibility along riparian areas. The *Local Government Act* provides that municipalities may enter into an agreement to create a public highway within a portion of the subdivided land at some future date. North Vancouver has effectively provided itself with a means to expand that portion of the Block B riparian strip in the future. In turn, this ensures that adequate land is available in that section for construction of the Boardwalk component of the waterfront trail system as outlined in both its OCP and recent Waterfront Study.

The Nanaimo case study further illustrates how conservation concerns and public access can both be addressed in municipal policy. The key distinction that must be made regarding access is that it is provided along the riparian area, as was done in the West Vancouver study, and not necessarily to the water itself. The site plan for the proposed subdivision clearly shows the path at a minimum of five metres from Beaver Creek.

The case studies consist of both tidal and non-tidal riparian parcels, allowing some general conclusions to be drawn. On subdivision of land, municipalities have effectively used dedication to obtain riparian strips of land, albeit for different purposes. Similarly, each of the two District studies have used negotiation with developers in the subdivision process to obtain riparian area land when other means would not allow or limited what could be obtained. Covenants were only used in the West Vancouver case study as a conservation tool as recommended by the DFO. Covenants were also used to protect a future right to provide public access along water in the North Vancouver study.

References:

[1] R.S.B.C. 1996, Chapter 250
[2] R.S.B.C. 1996, Chapter 323
[3] Note 2. s. 876(1).
[4] Order-in-Council 70/2000 [B.C. Reg. 17/2000]
[5] City of Nanaimo, Plan Nanaimo – Bylaw 6000. s. 0.1.1.

[6] Note 5. s. 1.
[7] Note 5. s. 1.3.2.7.
[8] Note 5. ss. 1.3.2.8 – 1.3.2.22.
[9] Note 5. s. 1.4.
[10] Note 5. ss. 1.4.2.1 – 1.4.2.4.
[11] Note 5. ss. 1.4.2.5 – 1.4.2.7.
[12] Note 5. s. 2.
[13] Note 5. s. 2.1.2.1 – 2.1.2.4.
[14] Note 5. s. 8.1.
[15] Note 5. s. 8.2.23.2.
[16] Note 5. s. 8.2.23.
[17] Note 5. s. 8.2.23.
[18] Note 5. s. 8.2.23.
[19] City of Nanaimo, Zoning Bylaw No. 4000. s. 5.3.1.3.
[20] City of Nanaimo, Subdivision Control Bylaw No. 3260. s. 4
[21] Note 20. s. 13.5. and s. 16.
[22] Note 19. s. 5.3.2.1.
[23] Note 19. s. 5.3.3.1 – 5.3.3.2.
[24] Note 19. s. 5.3.1.6.
[25] Note 19. s. 5.3.3.3.
[26] District of North Vancouver. *Official Community Plan – Summary*. February 28, 1996. p. 2
[27] District of North Vancouver. *Official Community Plan*. November 1991, Policy 3.1.2
[28] Note 27. Policy 3.1.3
[29] Note 27. Schedule B, s.2.1
[30] Note 27. s. 8
[31] Note 27. s. 12
[32] District of North Vancouver. By-law 6515
[33] c.II. Note 32.
[34] Note 32. s. 5
[35] District of North Vancouver. By-law 2169
[36] Personal Communication, February 3, 2000. Bill Rimmer, Assistant Manager Lands Division, D.N.V.
[37] District of North Vancouver. 1999. The Waterfront Task Force Phase Two Working Group, The Waterfront Task Force Interim Report. July 19th.
[38] B.C. Land Title Office, New Westminster, Land Title Number: 72716
[39] B.C. Land Title Office, New Westminster. Plan 6241. Registered on August 20, 1930
[40] B.C. Land Title Office, New Westminster. Land Title Number: 73215K
[41] Personal Communications, January 28, 2000. John Tarrant, (formerly with) Vancouver Port Authority, and Charles Hamfeldt, Vancouver Port Authority.
The *Land Registry Act* c.127 RSBC 1924 states in s.80(3) that "every highway, park, square or reserve…set apart for public use shall be shown as such, and delineated on the plan" providing further indication that Block B was originally intended for a purpose other than public access as it was not shown as such on the plan.
[42] Personal Communication, January 28, 2000. G. Miller, Chief Surveyor District of North Vancouver 1963-1970.
[43] District of North Vancouver. Historical Drawings retained at District Lands Department.
[44] Plan of Survey of Block B of District Lot 575, Group One, New Westminster District, Plan 6241. Certified Correct August 27, 1980. Obtained from Vancouver Port Authority.
[45] *Municipal Act* 1979, s 578(4). This is a precursor to s.539 of the *Local Government Act* c. 323, RSBC 1996
[46] B.C. Land Title Office, New Westminster. EP 18672. Explanatory Plan of Covenant over part of Lot 11, Block 3, District Lot 575, Plan 21447.
[47] B.C. Land Title Office, New Westminster. Plan LMP 22731

[48] Kahrer, A.G. 1985. *Logging and Landscape Change on the North Shore of Burrard Inlet, British Columbia, 1860's to 1930's*. M.A. Thesis. Department of Geography, University of British Columbia.

[49] Deep Cove Historical Society Records. Document 85-1-53. An interview in 1975 conducted by Janet Pavlik with John Moore, a local resident who spent his childhood in Deep Cove. Mr. Moore recalled that one of the families present in Deep Cove in the 1920s belonged to the boom man in charge of logging in Deep Cove substantiating that booms were present at the time. It is noted, however, that on a June, 2000 visual inspection of the Block B strip, no evidence of any such anchor points was observed.

[50] Reference is made to summer resorts at Deep Cove in the Report of the Commission inquiring into the Second Narrows Bridge, February 24, 1931. Sessional Paper 288, p. 6

[51] Corporation of the District of West Vancouver. Official Community Plan Bylaw No. 3413, 1988. s. 1.2

[52] Note 51. s. 2.9 (1)

[53] Note 51. s. 3.3

[54] Note 51. s. 3.3

[55] Corporation of the District of West Vancouver. By-law No. 3013

[56] Note 51. s. 3.3

[57] Corporation of the District of West Vancouver. By-law No. 2200

[58] Corporation of the District of West Vancouver. Development Permit File No.: 95-09. EBA Engineering Consultants Ltd. Geotechnical Report

[59] Note 58.

[60] Note 58. Department of Fisheries and Oceans Letter May 21, 1995

[61] Note 58. Letter from B.A. Lambert (Approving Officer) to L.L. Richards (Zoning & Development Planner). May 25, 1995

[62] Note 58. Gordon Place West Vancouver, Development Permit Application. June 7, 1995

[63] Note 58. Memo from L.L. Richards (Zoning & Development Planner) to Doug Allan (Municipal Manager). June 30, 1995

[64] Note 58. Letter from Michael Rosen (Michael Rosen & Associates, Planning & Development Consultants) to L.L. Richards (Zoning & Development Planner). August 21, 1995

[65] Note 58. Letters from Pike (Parks) to L.L. Richards (Zoning & Development Planner), September 13, 1995, and Doug Allan (Municipal Manager), October 31, 1995

[66] Note 58. Development Permit. October 23, 1995

[67] Note 58. Development Permit. November 20, 1995

[68] Personal Communications. June 19th, 1999 and May 24th, 2001. L.L. Richards. Zoning and Development Planner. D.W.V.

V. DEVELOPMENT

Municipalities have the authority to establish bylaws which regulate development. This chapter examines development as a trigger for establishing riparian strips for the purpose of sustaining riparian areas. It reviews the provincial legislation that provides for the development and use of land and then considers how development may be used for the conservation of habitat, prevention of economic loss and providing access purposes of sustainability at the municipal level.

Provincial Legislation

Section 218 of the *Land Title Act* (LTA) [1] allows for the creation of an easement known as a "statutory right of way." Subsection (1)(b) permits a land owner to create by grant or otherwise a statutory right of way in favour of a municipality. Registration of a statutory right of way on title is a charge on the land in favour of the grantee and gives the municipality the right to use the land in accordance with the statutory right of way terms and is binding on successors to title.

Section 219(2) outlines the extent to which covenants may require, restrict, or prevent the use or development of land on which the covenant is held. It is not surprising that little more regarding the development of riparian land is found in this Act, because its focus is on registering interests in land. Beyond registering a right to or a restriction on activity on a parcel through sections 218 and 219, the nature of title to land will not have an impact on development.

However, the *Water Act* [2] does refer to activity in riparian areas. Section 9 stipulates that an authorized government agent or an engineer may grant approval to "a person to make changes in and about a stream" or to a municipality to exercise its public works powers as outlined in the *Local Government Act*. [3] A stream is defined as a natural watercourse, whether it usually contains water or not and a lake, river, creek, spring, ravine, swamp, or gulch. Change in and about a stream includes:

> (a) Any modification to the nature of a stream including the land, vegetation, natural environment or flow of water within the stream, or

(b) Any activity or construction within the stream channel that has or may have an impact on the stream. [4]

A stream channel means both the bed and the banks of a stream, and therefore includes areas both above and below the natural boundary of the watercourse as well as all side channels. It does not specify the extent above the topographic natural boundary that falls within this definition or even provide a definition for the bank of a stream. In these terms, the *Water Act* restricts unauthorized activities on riparian land, but does not offer any means to remove it from private ownership.

Most requirements for development of land are imposed by municipal jurisdictions through Official Community Plans (OCP). Within an OCP, section 879(1) of the *Local Government Act* allows a municipality to designate Development Permit (DP) areas "for the protection of the natural environment, its ecosystems and biological diversity [and] protection of development from hazardous conditions."

Several prohibitions apply to lands in DP areas unless an exemption is specifically granted within the OCP. These prohibitions include subdividing or altering the land. An owner may also circumvent the prohibitions if they obtain a DP allowing the activity.

A DP designated for the protection of the natural environment may do one or more of the following:

(a) specify areas of land that must remain free of development, except in accordance with any conditions contained in the permit;

(b) require specified natural features or areas to be preserved, protected, restored or enhanced in accordance with the permit;

(c) require natural water courses to be dedicated;

(d) require works to be constructed to preserve, protect, restore or enhance natural water courses or other specified natural features of the environment;

(e) require protection measures, including that vegetation or trees be planted or retained in order to

(i) preserve, protect, restore or enhance fish habitat or riparian areas,

(ii) control drainage, or

(iii) control erosion or protect banks. [5]

While the use of a DP can result in the protection or restriction of use of riparian land, it does not require that it be dedicated to the municipality. Only the watercourse itself can be required to be dedicated in this manner.

For DP areas that are established due to hazardous conditions, a DP may designate specific sites of land that may be subject to flooding as sites that must remain free of development, except in accordance with any conditions contained in the permit. However, for sites that do not lie within a DP area, section 910 provides construction requirements in relation to floodplain areas. It states that a local government or the Ministry of Environment, Lands and Parks (MELP) may specify any structural support required so as to elevate a floor system above the flood level or require a setback from a watercourse or body of water. A bylaw enacted by a local government creating these setbacks has no effect until it is approved by MELP. Conversely, a local government may enforce specifications established by MELP as though they are bylaws of the local government.

As with the establishment of protected riparian areas through a DP, the establishment of floodplain areas through the *Local Government Act* can only restrict activity in these areas. There is no mechanism requiring that floodplain revert to the Crown or be dedicated to the municipality.

Division 11 states developmental requirements. Some aspects of subdivision requirements can be imposed on developments that are not the result of subdivisions. Section 939(2) stipulates that local government may require the owner of land being developed to provide extended works and services. Extended works and services is defined as a portion of a highway system that will provide access to land other than the land being subdivided or developed. In terms of riparian areas, this could be interpreted as a portion of a highway immediately adjacent to the site – a public access way along the water – that will provide access to land beyond the land being developed.

One final aspect of the *Local Government Act* respecting riparian land bears noting. Enacted in October of 1997, section 343.1 provides a means for local governments to allow tax exemptions on riparian property if it is subject to a covenant under Section 219

of the *Land Title Act*. The exemption is granted for only that portion of the property that falls within the covenant. Nevertheless, the option to use this exemption lies with the local government and not at the request of the landowner who has arranged for such a covenant on his land.

It is evident that the provincial legislation respecting the development of land does enable, and in a limited sense require, the sustainability of riparian land in British Columbia. Means are available to restrict activity to protect or conserve the aquatic environment, to confine construction in floodplain areas, and to impose public access requirements on developers of riparian land. The majority of these powers have been delegated to local governments under the *Local Government Act*.

The following section uses the electoral area of Sooke and the two municipalities of Comox and Victoria to examine the subordinate legislation that has been adopted under the *Local Government Act*. Within each jurisdiction, a case study is used to investigate the approaches taken by local governments in the development of riparian areas.

Comox

The Town of Comox is situated in the Comox Valley on the Comox Peninsula of Vancouver Island. According to the OCP, it is a predominantly residential community that "has been allowed to naturally establish itself without regulatory encouragement." [6] It is a waterfront community that recognizes the need to maintain and improve public access to the waterfront. Their vision for the future, garnered from public input, is that Comox "will retain an ambience as a village by the sea." [7]

To provide substance to this vision, the Council has developed a set of objectives, two of which are applicable to riparian land. The first is the desire to make the waterfront more accessible for the entire public. The second is the need to identify, protect and enhance environmentally sensitive aquatic natural resources for the benefit of fish and wildlife and natural ecosystems. [8]

Policies provide the means to achieve the objectives and goals set by the community. Sections of the OCP dealing with riparian issues are Parks and Recreation, Environment

and Resources, and the Waterfront. Enhancing the policies are Local Area Plans that provide direction for portions of the Town. Finally, Development Permit Area Guidelines require specific criteria be met for designated areas.

The Parks and Recreation section states that preservation of the scenic nature of the waterfront is required. Yet, it is also desirable to improve access to the waterfront for the public by increasing the number of parks and access points and complete the development of a waterfront walkway system. [9]

The objective of the Environment and Resources section is to preserve the environment. Policy statements include the requirement for developers to provide an Environmentally Sensitive Area study for any project on large undeveloped tracts of land (over four hectares). These sites include all watercourses and wetlands. [10]

Brooklyn Creek is the main freshwater watercourse in the jurisdiction. All land within 30 metres of the creek is deemed a Development Permit Area in pursuit of the objective of no net loss to the productive capacity of fish habitat. Any development along this watercourse must comply with the *Land Development Guidelines* provided by the Federal Department of Fisheries and Oceans (DFO) and the Provincial Ministry of Environment, Lands and Parks (MELP). Further, the minimum distance any building may be situated from the natural boundary of the creek is 15 metres. [11]

The waterfront/foreshore area is also declared an environmentally sensitive area and is therefore deemed a Development Permit Area. A policy of no net loss of habitat applies in this area. Any development proposal submitted to the Town must be accompanied by an environmental impact assessment and must comply with the recommendations of that assessment. [12]

The community has as a long-range objective the desire to develop a public walkway along the full length of the waterfront. The OCP notes that the Council intends to explore and use a variety of mechanisms to acquire rights of way over, or ownership of, shoreline properties as they become available. The development of the waterfront walkway will be a condition of future subdivision of waterfront property. In providing the guidelines for the waterfront DP area, the OCP states “public walkways will be required to be dedicated

and where feasible constructed by developers of waterfront properties." [13] There is no explanation given for what is considered feasible. The Town may also purchase waterfront property as a means to create the walkway if the opportunity presents itself. [14]

In support of the policies outlined in the OCP, the Comox Zoning Bylaw provides regulations governing the use of land, buildings and structures within the jurisdiction. Under special restrictions, it stipulates that:

> No building shall be constructed nor mobile home located:
>
> (a) with the underside of the floor system of any area used for habitation, business, or storage of goods damageable by flood waters, or in the case of a mobile home, the ground level on which it is located, lower than 1.5 m above the natural boundary of the sea, whichever elevation is higher.
>
> (b) within 15 m of the natural boundary of a watercourse and within 7.5 m of the natural boundary of the sea. If land fill is used to achieve the required elevation, no portion of the fill slope shall be closer than the above distances from the natural boundary and the face of the fill slope must be adequately protected against erosion from flood waters.[15]

A natural boundary is defined as:

> The visible high water mark of any lake, river, stream, or other body of water where the presence and action of the water are so common and usual, and so long continued in all ordinary years, as to mark upon the soil of the bed of the lake, river, stream or other body of water, a character distinct from that of the banks thereof, in respect of vegetation as well as in respect to the nature of the soil itself.[16]

One other reference is made to riparian areas in the bylaws. The Comox Tree Cutting Bylaw [17] delineates tree cutting permit areas within the jurisdiction. The extent of these areas comprises all land lying within 60 feet of the topographic top of the bank of a watercourse. No trees of greater than 10 cm in diameter may be cut down or removed in these areas without a valid permit. The Town may require the submission of an engineer's report with an application for a permit if there is a possibility that the removal of the tree could pose a flooding or erosion concern.

The majority of the bylaws in Comox regarding riparian land are concerned with public access and conservation of the natural environment, though bylaws like the Comox Tree

Cutting Bylaw do address the potential for flooding. To illustrate, the following case study looks at the development of a waterfront site.

White Fin Development

Description: The land is 0.307 hectares in size divided between two parcels. The current legal descriptions are: Lots 1 and 2, Section 56, Comox District, Plan VIP69621. Development is proceeding on Lot 1, while the Black Fin Pub is situated on Lot 2. The developer owns both properties. Each of the properties fronts on Comox Harbour in downtown Comox (Figure 13).

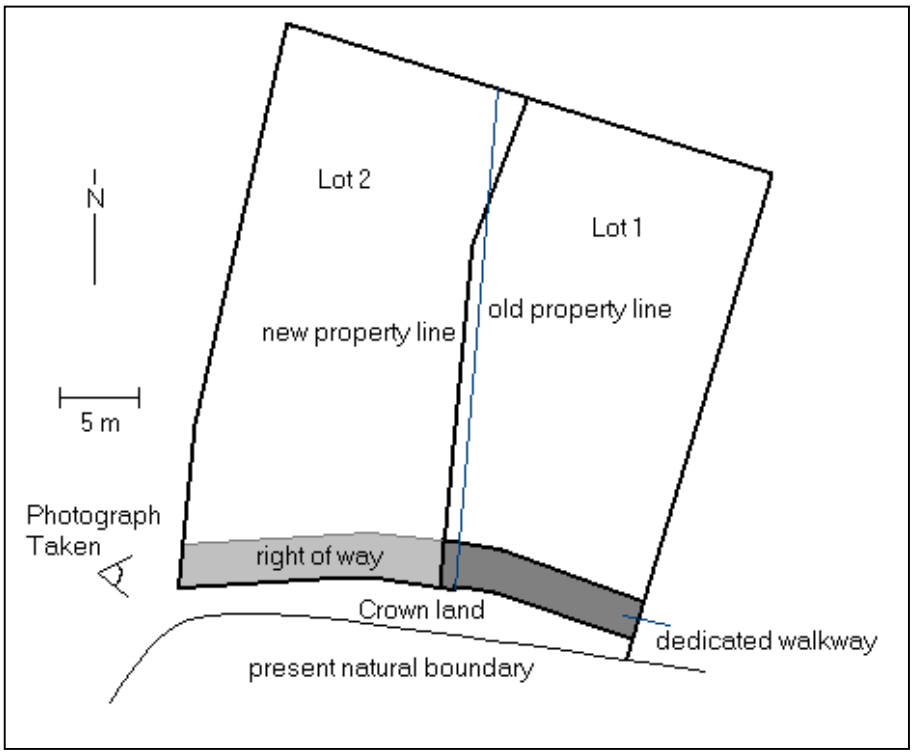

Figure 13 – Whitefin Development

Chronology:

August 7th, 1998: An application was made to develop Lot A, Section 56, Comox District, Plan 38134 (now Lot 1) for mixed use residential/commercial with a dedicated public walkway along the waterfront portion of the property. The proposed building envelope was set back 25 feet (7.5 m) from the present natural boundary, which ranges from approximately two to five metres lower along the frontage than that shown on Plan 38134. [18]

August 10th, 1998: The Town of Comox Planning Department referred the development application to the Ministry of Environment, Lands and Parks (MELP), the Department of

Fisheries and Oceans (DFO), and the Ministry of Transportation and Highways (MOTH) for consideration. [19]

September 16th, 1998: The Planning Department presented the application to the Town Council with the recommendation that the application be referred to the Advisory Design Panel. Several comments were provided to Council regarding the application. Since the property lies within the Marine Plaza Development Permit Area, the application had to be reviewed with respect to the DP guidelines.

The applicant proposed to adjust the property line between the two parcels to allow the alignment of building facings. Also, the applicant agreed to dedicate a three metre wide greenway along the waterfront portion of the property and construct a walkway thereon, in consideration of the waterfront walkway plan. [20]

September 30th, 1998: MELP responded to the Planning Department query respecting the application with no objections, provided two conditions were met. First, the foreshore vegetation was to be protected with a setback as to be determined in a meeting with the local District Habitat Officer. Second, adequate flood protection measures from the sea were to be provided by ensuring that all buildings would be setback 15 metres from the natural boundary or 7.5 metres if the frontage had adequate erosion protection. [21]

October 7th, 1998: After review by the Advisory Design Panel, the application was brought again before Council and the Planner recommended approval with several conditions. Council endorsed these and approved the application.

The conditions were obligations that the developer had to fulfill prior to the Town issuing a building permit. These included submitting the subdivision application for the adjustment of the west lotline, the registration of the waterfront walkway dedication and the registration of a statutory right of way for public access along the proposed walkway. The dedicated strip was increased from three to four metres in width. [22]

October 20th, 1998: Under the direction of MELP and DFO, the design of the waterfront path was to be a walkway constructed on piles to minimize impact on shore vegetation. The final design was to be confirmed at the building permit stage. [23]

March 12th, 1999: A Draft Development Permit was sent for review to applicant. [24]

May 26th, 1999: The developer submitted a proposed plan of subdivision for the realignment of the west lotline to the Planning Department. The proposed plan indicated that a four metre strip of land would be dedicated for a waterfront walkway on both the lot to be developed and the existing Black Fin Pub lot to the west. To the north of the dedicated strip, proposed statutory rights of way were also indicated on both lots to allow public access to footpaths and stairs. [25]

May 31st, 1999: The Town of Comox issued a Development Permit to Black Fin Pub Ltd for the site at 1757 Beaufort Avenue. The dedication of a four metre wide strip of land to the Town for purposes of a waterfront walkway, and the registration of the statutory right of way for the public walkway remained as requirements for the issuance of a building permit. [26]

July 7th, 1999: R. Glover applied on behalf of the developer seeking preliminary approval of the subdivision of Lot 1, Plan 15621 and Lot A, Plan 38134, both of Section 56, Comox District. With the adjusted lotline separating the two parcels, two new lots were to be created: Lot 1 on the east and Lot 2 to the west. [27]

July 30th, 1999: Preliminary Layout Review was granted to the application for subdivision, with final approval to be granted upon satisfaction of the Approving Officer's requirements. One requirement relative to the riparian area was for the provision of a four metre wide right of way along the waterfront portion of Lot 2 – formerly Lot 1, Plan 15621 – and a four metre wide dedication along the waterfront portion of Lot 1 – formerly Lot A, Plan 38134 – to permit the construction of the waterfront walkway. The construction of this walkway remained the responsibility of the developer. [28]

September 14th, 1999: A draft of the statutory right of way across the Black Fin Pub property – formerly Lot 1, Plan 15621 – was provided to the Town of Comox. The statutory right of way was to be registered at the Land Title Office, concurrently with the subdivision plan. [29]

October 4th, 1999: The subdivision and statutory right of way over the waterfront portion of the west lot was registered at the Victoria Land Title Office. The statutory right of way was granted to the Town of Comox for the purpose of a public pedestrian walkway. [30]

October 22nd, 1999: The developer confirmed the undertaking to construct a walkway along the waterfront portion of the property in accordance with specifications to be agreed to with the Town. In consideration of this, the developer requested that a building permit be issued to the general contractor. [31]

January 17th, 2000: A conceptual plan was provided for the public walkway to the Town of Comox for review. Included with the plan were recommendations for a process to resolve any technical issues associated with its construction and maintenance. [32]

The development of the White Fin property is a good example of how development can be closely linked with the subdivision process. The Town of Comox utilized both processes to achieve the waterfront walkway for public access purposes. Yet, in doing so, it also considered the need to conserve the riparian habitat.

To provide the walkway, the Town required, as a condition of its DP, that the walkway area be dedicated on the parcel that was being developed. In the early stages of the negotiation process, a dedication was also offered by the developer on the west property, with an additional right of way to be granted to the Town on each property to the north of the dedications for public access purposes. Later, during the actual subdivision process, the requirements were altered. In the end, it was agreed that the walkway was to be dedicated on the parcel under development with a statutory right of way granted over the existing walkway on the western parcel.

The initial survey for the proposed development showed a considerable strip of land, approximately two to five metres in width, along the shore between the present natural boundary and that indicated on the plans delineating the original lots. R. Glover, BCLS noted on his plan of survey that the intervening area could be either fill or accretion. Glover showed on later surveys the land as belonging to the Crown.

Figure 14 – Whitefin Public Walkway

In order for the land owner to lay claim to the strip of land as accretion, a subdivision or reference plan would have to be registered at Land Titles with the endorsement of the Minister of Environment Land and Parks specifying that the land is lawfully accreted land. [33] With this endorsement, the Registrar will accept that the owner has established title in fee simple to the accreted land. The Minister must not certify a plan if the Minister is not satisfied that the land in question is lawfully accreted land.

Considering the steepness of the bank at the location and the nature of the soil and vegetation, it was possible that subsidence had occurred and was the cause of the new upland (Figure 14). Due to the potential for delay in development, the land owners made no effort to claim the strip as accreted land when initiating the development process with the Town. [34] This appears to be a significant point, as the current registered plan indicates the new lots are fixed with monuments at all corners and the strip of land belongs to the Crown.

The developer was more concerned with the setback requirement for placement of the building on the site than obtaining the potentially accreted land. The developer agreed with the Town that 25 feet (7.5 m) was required as a setback from the present natural boundary. This allowed the building to be constructed considerably nearer the water than would have been available if the legal natural boundary according to the original plan had

been enforced in determining the setback. Following the development approval, the owner did proceed with a claim for the accreted lands but the application was refused. [35]

Sooke

As an Electoral Area (EA), Sooke has slightly different jurisdictional requirements and obligations than that of municipalities. The main distinction lies in the power to create and enforce bylaws in the EA falls with the Capital Regional District (CRD). Beyond this distinction, the bylaws apply in the same manner as municipal bylaws.

The EA of Sooke forms the westernmost component of the CRD, which is at the southern end of Vancouver Island. Sooke has traditionally been a resource-driven community – primarily relying on logging and fishing – but due to its proximity to Victoria, it has seen an increase in recreational and retirement activity in recent years. [36]

The OCP for Sooke states that its purpose is "to be a guide to the orderly development of the most populated portion of the Sooke Electoral Area." [37] In achieving this purpose, the plan provides for broad social, economic, and conservational objectives by seeking to:

> retain the predominantly rural character of areas outside its core … to protect land and water areas necessary for resource-based industries, such as fishing and forestry … to identify and protect those natural features which impart to Sooke its special character … [and] to promote an overall development pattern that is in harmony with the natural environment. 38

Two sections of the OCP impact riparian areas. These sections provide objectives and policies that deal specifically with the Natural Environment and Open Spaces. Section 2.1 has the largest impact on riparian areas as it deals with the Natural Environment. The objectives stated in this section include ensuring the protection of the Marine Shoreland environment; enhancing lakes, rivers, streams and wetlands by ensuring the protection of their natural amenities and protecting and enhancing the fisheries; and maximizing the safety of residents from natural hazards. Both general and specific policy statements support these objectives.

General policy statements provide for Sensitive Environmental Areas such as protected rivers, streams and lakes. Further, the Ministry of Environment, Lands and Parks is to be involved in encouraging new development to be directed away from areas that are

susceptible to flooding, erosion or landslip. Finally, general policy requires that any proposed development that may be contrary to the objectives of the OCP must provide studies that consider aspects such as fish and wildlife habitat, the marine environment and adjacent land uses. [39]

Policies specific to the Marine Shoreland have been established to preserve in its natural state, as much as possible, the rugged coastline with its beaches and protected bays. Restrictions that are imposed include the stipulation that fill may not be placed beyond that required for the prevention of erosion and that no principal buildings may be located within 15 metres of the mean high water mark. Sooke encourages shoreland to be retained – with adjoining upland areas whenever possible – as open space for public use and that public access to shoreland environments be improved. When these areas are in private ownership, it also encourages owners of shorelands to leave setback areas in a natural state. [40]

Inland riparian area policies are provided in section 2.1.5 for the protection and conservation of wild life habitats and recreation areas. Policies encourage the retention of vegetation cover on stream banks and support the MELP and the DFO in the protection of streams, creeks and rivers in the region. Prohibitions are placed on the construction of buildings within 15 metres of streams and lakes, or from the area below the 200-year flood level if it can be determined. Further, the horizontal distance setback for construction of buildings is increased to 30 metres for five sensitive watercourses. As with the Marine Shoreland, the placement of fill is also discouraged in lakes or river channels so as to protect habitat.

Where a subdivision is proposed that is adjacent to a body of water, the land adjacent to the water is to be dedicated as park or alternatively, a restrictive covenant must be registered on title to ensure the protection of the riparian area. To afford recreational access, a high priority is to be provided to establishing primary and secondary trails along the above rivers and streams. These trails are to be created in such a manner that fish habitat is not damaged via stream bank vegetation removal and that erosion potential is minimized. [41]

To maximize the safety of residents from natural hazards, the Sooke OCP guidelines associated with Development Permit (DP) areas also include the restriction from building permanent structures in areas subject to flooding and the requirement that all new lots must provide for suitable building sites in areas not subject to flooding. Finally, prior to being issued a DP, an applicant may be required to provide a report completed by a certified geotechnical or civil engineer to assist the CRD in determining what conditions must be imposed in the permit. [42]

The OCP provides a set of objectives regarding Open Space for the community. These are to acquire, develop and maintain a system of parks for use by the residents and to enable convenient public access to the Sooke Harbour and Basin. Policies respecting open spaces require that care should be taken to ensure that the natural landscape is not disturbed more than necessary in the development of these parks and trail systems. Open Space is defined as:

> existing parks and potential park areas which, due to proximity to lakes, rivers or the ocean, have a special suitability for recreational uses and/or should be retained in as natural a state as possible. [43]

A general recommendation states that the provisions of the *Local Government Act* and the *Land Title Act* should be used as means for obtaining land for open space and public access purposes. [44] No specifics are given which would suggest that all possible means should be considered when seeking to achieve these purposes.

The Sooke Land Use Bylaw supports the objectives and policies set out in the OCP. [45] Provisions are made for flood control, environmental protection and public access to beaches. Section 4.04 of Part 1 – General Regulations deals with flood control and environmental protection. It stipulates that no buildings or structures may be built except in accordance with Part 5.

Part 5 deals with Floodplain Management and requires that building may not occur within the Floodplain. A Floodplain is defined as any land lower than Flood Construction elevations or within Floodplain Setbacks. Flood Construction levels are measured as lines of elevation 3.0 metres above the Natural Boundary of designated creeks and rivers or 1.5 metres above other water bodies. Floodplain Setbacks are in the

horizontal plane and are measured from the Natural Boundary as well. The setback is 30 metres for designated creeks and rivers, 15 metres for the sea and other watercourses, 7.5 metres for lakes, marshes and ponds. When there is potential for more than one application of the Flood Construction levels or Floodplain Setbacks, the greater elevation or distance will be used. When the floodplain specifications are found to be applicable in a development, a British Columbia Land Surveyor's certificate may be required by the Building Inspector to verify compliance with the Bylaw.

A final application of the Land Use Bylaw respecting riparian areas is found in the Highways section of Part 6 – Subdivision Servicing Requirements. When pedestrian access is required to beaches, walkways should be dedicated, pursuant to section 75 of the *Land Title Act*.[46] The access is required to reach the waterfront, but does not stipulate that a walkway is to be created along the waterfront.

The Sooke OCP and Land Use Bylaw provide an example of how a community has endeavoured to protect the natural environment while allowing for public access. The following case study looks at a how these policies are applicable in an established setting.

West Coast Road

Description: The property is a three acre parcel. The legal description is: Lot 1, Section 8, Otter District, Plan 22722. It is located along the West Coast Road, near Sooke (Figure 15).

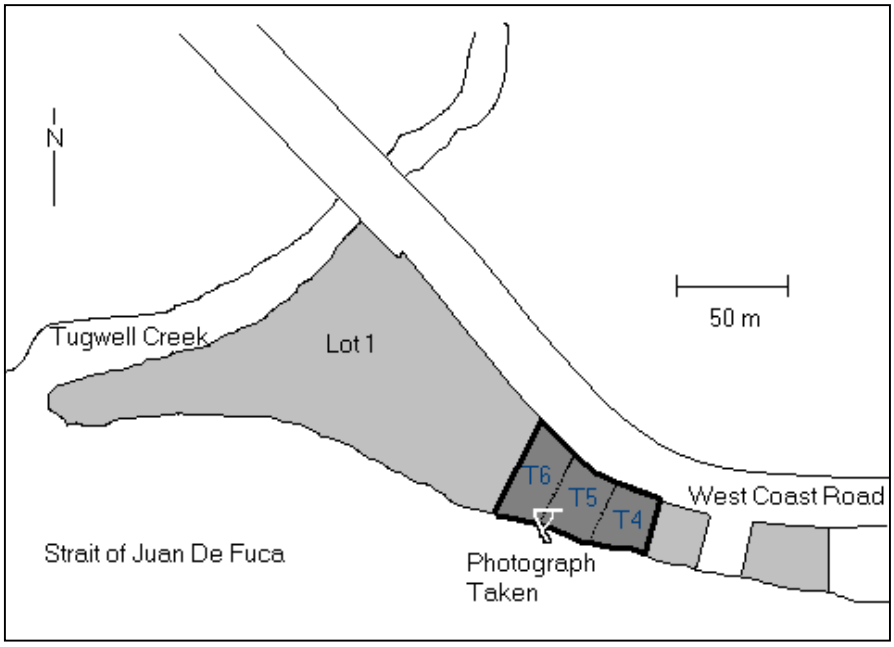

Figure 15 – West Coast Road Development

Chronology:

1956: Leslie Smith purchased a lease for a subplot, described as T4, which was a part of Parcel A, Section 8, Otter District. Subplot T4 was one of twenty-one subplots surveyed on the parcel. [47]

1960s: Leslie Smith further purchased the leases for subplots T5 and T6. [48]

September 17th, 1968: J.E. Anderson, BCLS surveyed the plan of subdivision of part of Parcel A, Section 8, creating Lot 1. The three leasehold subplots are located on the land that comprised the newly created Lot 1. The southern portion of the bed of Tugwell Creek was noted as Returned-to-Crown as per Section 112(3) of the Land Registry Act. [49]

Early 1970s: Leslie Smith constructed a cabin that straddled the two subplots T4 and T5 within a few metres of the natural boundary of the sea (Figure 16). [50]

Figure 16 – Sooke Natural Boundary Proximity

1977: The CRD enacted zoning Bylaw 282 restricting building density to three family units per parcel. Floodplain setbacks from the natural boundary of both Tugwell Creek and the sea were also included restricting the construction of buildings. The cabins already built on all of the subplots were allowed as lawful non-conforming uses of the property. [51]

November 28th, 1978: Leslie Smith, in conjunction with the sixteen other leaseholders in the property, purchased Lot 1 from the registered owner, and became tenants in common of the undivided parcel. A Community Property Agreement was signed, which entitled Leslie Smith to the exclusive use of the subplots T4, T5, and T6. Leslie Smith's interest in the property was described on title as an undivided 102/600th interest. [52]

October 11th, 1991: A fire resulted in approximately 50% damage to the Smith building. Rather than repair the damage, Leonard Smith (Leslie's son) made application for a building permit to build a new cabin in the same location but was refused; there was no record of this application with the CRD. [53] The lack of record might be attributed to the withdrawal of the application. He did so when he was informed that a building permit would not be granted due to the non-conformance with density requirements on the property and to the infringement of the floodplain setbacks. [54]

February 1992: Leonard Smith arranged with the Otter Point Fire Department to conduct a practice burn on the remainder of his cabin for the purpose of demolition and to allow a new cabin to be constructed. Following the demolition, he began construction of a new cabin in the same location without a building permit. The CRD placed a stop work order on the construction, arguing that, because the old cabin was completely destroyed, s. 970 (8) of the *Municipal Act* had been contravened. Section 970 (8) states that:

> Where a building or a structure, the use of which does not conform to the provisions of a rural land use bylaw or a bylaw under this division is damaged or destroyed to the extent of 75% or more of its value above its foundations, as determined by the building inspector, it shall not be repaired or reconstructed except for a conforming use with the bylaw. [55]

The CRD further contended that the reconstruction is not in conformance with the floodplain setbacks established in bylaw. Regardless, Smith built his cabin.[56]

March 27th and April 1st, 1996: The CRD (plaintiff) filed an application that was heard in the British Columbia Supreme Court seeking a declaration against Leslie and Leonard Smith (defendants). The CRD argued that the defendants breached the zoning bylaws of the CRD in reconstructing their cabin and requested an order that the defendants be restrained from using or occupying the cabin and requiring them to remove the building from its present location. [57]

April 30th, 1996: Justice Quijano held that the legal non-conforming use legislation was to ensure fairness and protect existing common law rights. In this respect, the high-density use of the property prior to the enactment of the density bylaw was ruled a pre-existing right. Therefore, the Smiths did have the right to rebuild their cabin on the property. However, the floodplain setback was found to be applicable to the new cabin as the non-conforming use exemption was specific to the old cabin that was destroyed. Thus, the defendants were ordered to move their cabin to a location that would conform to the floodplain setbacks. [58]

September 1st, 1998: The CRD appealed the judgement to the Court of Appeal for British Columbia with a cross-appeal filed by the Smiths. The CRD sought injunctions preventing the Smiths from using or occupying the land until the offending building was removed – whether by the defendants or by the CRD at the defendants' expense. The Smiths sought to have the trial order (that the rebuilt cabin must comply with the floodplain setbacks) set aside as an error in the application of the bylaw. [59]

December 2nd, 1998: The British Columbia Court of Appeal disagreed with the legal analysis of the lower court, yet it agreed with the factual conclusions reached by that court. The court used its discretionary power to allow the building to remain due to the peculiarities of the situation: to remove the building would result in little change to the character of the property, as several other cabins remain throughout the property. Yet, it would result in substantial loss and hardship to the Smiths. The court provided an interesting comment in that the application by the CRD might have been received differently, if it had been brought prior to the cabin being rebuilt. [60]

The court also dismissed the cross-appeal as they could find no flaw in the reasoning of the trial judge's application of the bylaw respecting floodplain setback requirements. The court considered this a safety issue and determined that means had been raised during the appeal to either bring the cabin into compliance with the floodplain requirements or to obtain exemptions to them. As neither of these avenues had been explored, the court saw no reason to grant the cross-appeal and agreed with the trial judge that the Smiths should be required to comply with these provisions of the bylaw. [61]

February 24th, 2000: The CRD has indicated that they would grant a building permit if Smith obtained a variance of the floodplain setback requirement from MELP. Otherwise, as provided for under section 700 of the *Local Government Act*, [62] the CRD has considered registering a notice against the title to the land that building regulations have been contravened.

Smith continues to occupy the property and has made no effort to date to obtain a relaxation of the setback requirements from the MELP. [63]

This case provides a good example of the difficulty facing regulatory agencies in establishing sustainability measures that affect pre-existing uses on privately held riparian land. A resident is unlikely to be willing to surrender a use or activity that they have engaged in for some time. There is a distinction between imposing restrictions on an existing use, and establishing restrictions against a new use.

Two points of interest arise from this study. The first is the comment by the court regarding the possibility of a different outcome had the CRD presented its case prior to the cabin being built. The CRD did try to enforce the bylaw when it placed the stop work order on the building. However, the CRD would have had to file a Statement of Claim in the court to have had a better chance of enforcing the bylaws as suggested by the Court of Appeal.

Secondly, it was Smith's choice to proceed with a practice burn of his partially destroyed cabin. After the initial fire, Smith would have been permitted under the bylaw to repair his cabin, as it was not more than 75% destroyed. This would have placed him in essentially the same situation he is in today, except with a valid non-conforming use

building. It was his decision to allow the practice burn that resulted in the loss of his cabin's lawful non-conforming status. This is the rationale the court adopted in allowing the new cabin to remain.

Victoria

The City of Victoria OCP identifies that " [Victoria] Harbour will be a focal point for the City." [64] The importance of the Harbour to the future of the community is evident in the efforts to develop a Victoria Harbour Plan. [65] The Harbour is of considerable significance to the municipality due to the lack of rivers and streams present within municipal boundaries. The Harbour area encompasses the Inner Harbour, Upper Harbour and Selkirk Waters portions of the waterfront. It is one of the few natural harbours on the Coast and has played a central role in the development of Victoria.

Significant consideration has been given to urban design issues with respect to the environment within the municipality. Policies relating specifically to riparian areas include providing public access to the waterfront and that new development should respect natural surroundings. [66] The key direction noted is that emphasis is to be placed on integrated waterfront planning with a balance between public access and marine priorities. As a whole, the waterfront is to be made more accessible with public paths allowing residents and visitors to enjoy activities that will make the Harbour even more of a gathering point than at present.

The City recognizes that the physical environment is of importance and that continued enhancement is required. Policies are identified in the OCP that aim to meet these objectives. The City promotes those activities that contribute to tourism, retirement and industrial development; ensures that industrial activities in transitional areas, such as the waterfront, should meet performance standards; and the City should "ensure that all new development enhances rather than detracts from the visual quality of its surroundings." [67]

To ensure these needs, the OCP identifies Development Permit Areas. Prior to the issuance of a building permit, Council approval must be obtained in these areas in order to safeguard special characteristics, such as local character. A significant portion of the waterfront is included in five of these Development Permit Areas. [68] Two somewhat

contradictory themes found in establishing these areas are "protecting the natural environment" and providing "linear public access where practical to the water's edge." [69] Even so, with the guidance given in the OCP, in conjunction with the Development Permit Area designation, Council has sufficient means to ensure that suitable uses are maintained in the identified riparian areas.

However, there is little direction provided so as to fulfill these policies in the municipal bylaws. Beyond the OCP requirement that the existing shoreline is to be preserved and that public access is to be improved, there are no explicit mechanisms or techniques outlined in implementing these policies. The only stipulation placed on riparian land is found in the Zoning Regulation Bylaw. [70] For waterfront zoned areas, a building setback of 7.5 metres from high water mark is required. No definition within the bylaw is given for high water mark. [71] Further, there is no mention of floodplains in any context within the municipal bylaws.

Negotiation is used to achieve the policies. To illustrate how the municipality's objectives can be achieved in this manner, the following case study reviews the proposed development in one of the Development Permit Areas.

Bayside Village

Description: The property is 4.74 hectares in area. The current legal description is: Lot 2, District Lot 119, Esquimalt District, Plan VIP54427. The property lies on the Songhees Peninsula within the community of Vic West. Its eastern boundary is 650 metres of shoreline on the Selkirk Waters portion of the Victoria Harbour (Figure 17).

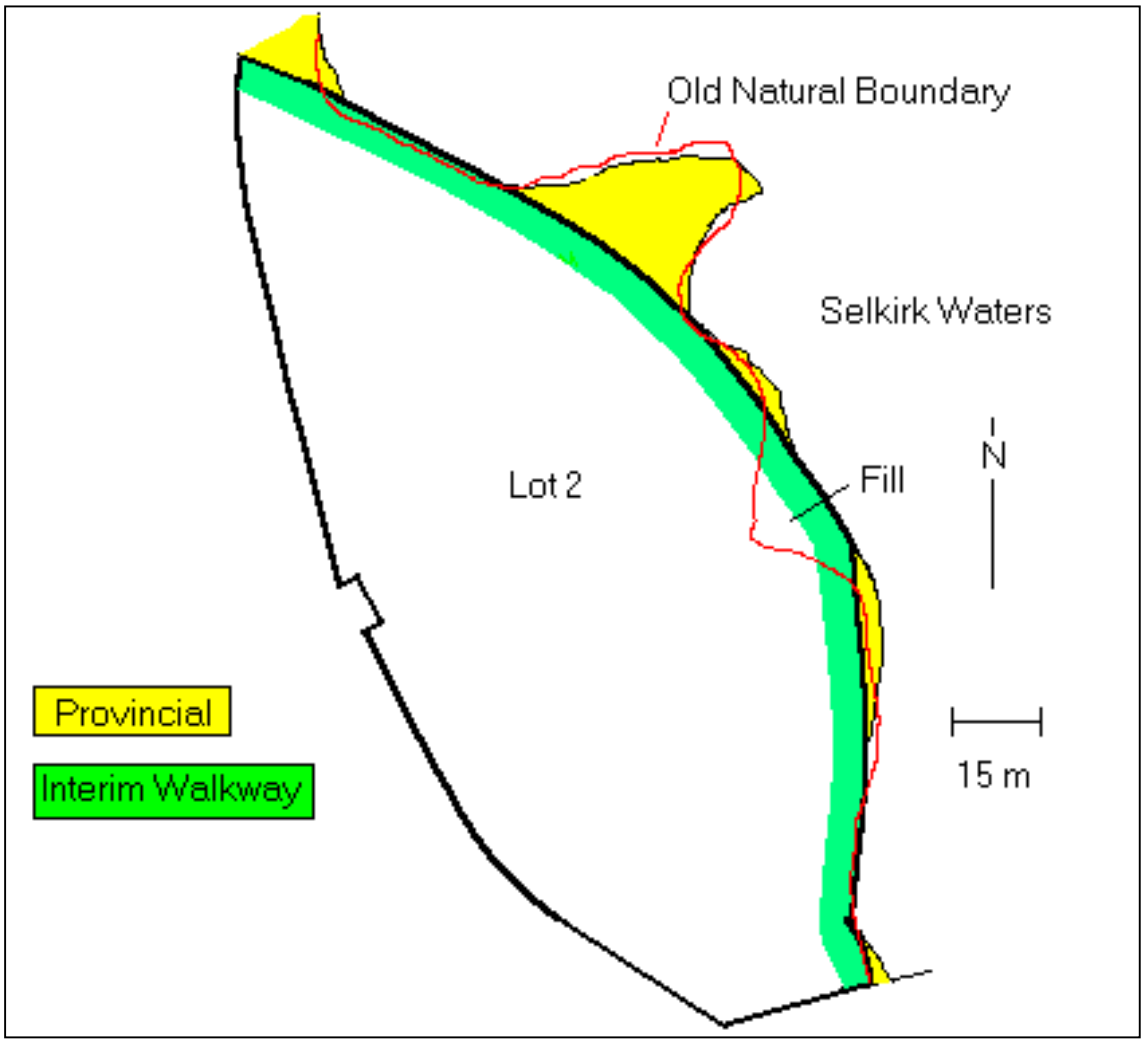

Figure 17 – Bayside Development

Chronology:

1919-1990: The CN Railway constructed a rail terminal and maintenance facility on the site in 1919. In 1965, the mainline rail traffic ceased and the site continued to be used for local freight siding operations. All CN operations ceased altogether on the site in 1989 and the track and yard equipment was removed the following year. [72]

1992: Canadian National Real Estate (CNRE) initiated with the City of Victoria the dual process of redeveloping and subdividing the Bayside Lands site for mixed commercial and residential use.

April 2nd, 1992: Ian Hughes, BCLS surveyed the proposed consolidation of the Bayside lands (now Lot 2). The topography of the site had been significantly altered through filling and leveling from past industrial activities. [73] As a result, several portions of the upland comprising the proposed lot consisted of filled foreshore. [74]

June 22nd, 1992: A Land Exchange Agreement was signed between the Province of British Columbia, the City of Victoria, and the CNRE regarding the development of the Bayside Lands. Section 9.1 stipulated that:

> CNRE and the City agree that CNRE shall, concurrently with the subdivision of any portion of the Bayside Development Area for residential development, dedicate and/or make provision for, as public park, such areas of the Bayside Development Area as may reasonably be agreed to be required to create a public park of a width of approximately, but not less than 9 meters generally parallel to the water boundary of the Water Front Lot Uplands.

The City acknowledged that any such provision would be credited against any City requirement for park dedication as provided for under the *Local Government Act*. The purpose of the waterfront park was "to preserve, as closely as is practical … the natural environment of the existing shoreline." [75] The Province agreed to transfer to the City the fee simple interest in the upland and foreshore portions of the waterfront as would be required for public park purposes when the development proceeded. [76]

September 1992: Westland Resource Group completed an Environmental Impact Assessment (EIA) on the Bayside Lands for CNRE. Issues raised by the Department of Fisheries and Oceans (DFO) and Ministry of Environment, Lands and Parks (MELP) for the EIA included the policy of "striving for a net gain of productive shoreline habitat throughout the intertidal zone of Victoria Harbour." One means offered for achieving that policy would have been to "provide a Return-to-Crown of 15 meters of land above high tide mark and all foreshore below high tide." [77]

September 22nd, 1992: The municipality began the review process for development guidelines and zoning for Bayside Lands. [78]

July 18th, 1994: The Concept Plan was submitted to the Planning Department, which depicted the proposed walkway/pathway along the waterfront. [79]

July 19th, 1994: The Planning Department expressed concerns respecting the proposed development on the Bayside Lands. These included the need for verification of any relationship with both the Provincial and Federal Crown regarding the waterfront, the requirement that any plan submitted must show the high water mark in relation to the proposed park areas and development parcels, and that adequate public access must be provided to the waterfront. [80]

August 5th, 1994: CNRE confirmed that the transfer of Provincial lands to the City would be a two-stage process. First, CNRE and the City had to finalize a plan that the City would support and provide the appropriate zoning to permit waterfront park use. Second, the City could then make application to the Province for the immediate Crown grant of the upland portions of the Bayside Lands that remained in Crown possession, and CNRE could then apply for permission to fill and develop the foreshore in accordance with the plan. [81]

September 6th, 1994: The developer provided proposed subdivision drawings illustrating all property lines, present natural boundary, top of bank, and area of intended park along waterfront that was lying in Provincial lands. [82]

October 21st, 1994: Parks and Recreation indicated that the banks of the property along the waterfront appeared to be very steep and erosion control measures had to be clarified. All future drawings for the development site had to indicate which areas were to be maintained by private developments and which were to be publicly maintained open space. [83]

January 31st, 1995: City Engineering Department provided the developer with conditions of Subdivision Approval for the preliminary subdivision application submitted concurrently with the rezoning application on June 28th, 1994. Conditions included the adoption by Council of the proposed rezoning bylaw and the associated Community Plan Amendment designating the Bayside Village Lands as a Development Permit Area. Further, a Development Permit to subdivide would be required prior to any final subdivision approval. [84]

Figure 18 – Bayside Interim Walkway

February 6th, 1995: The City Solicitor recommended that an interim waterfront pathway be included in the Master Development Agreement until such a time that a subdivision development proceeds (Figure 18). [85]

February 23rd, 1995: The Master Development Agreement between the City and CNRE was signed. Bylaws were passed by Council amending the OCP to include the Bayside Development, [86] amending the Zoning Regulation Bylaw to create the Bayside Comprehensive District (CD-3), [87] and changing the zoning for the Bayside Lands from Heavy Industrial (M-3) to CD-3. [88] In the new CD-3 zoning, a setback of 1.2 metres from any boundary adjacent to a waterfront pathway would be required for all buildings.

October 16th, 1995: Pursuant to Section 214 of the *Land Title Act* R.S.B.C. 1979, c. 219, CNRE granted to the City the registration of a statutory right of way on the title to Lot 2. The statutory right of way provided that the City and all its invitees (which included the general public) were permitted the free and uninterrupted use over part of Lot 2 as a pedestrian and bicycle pathway. The interest was limited to allow passage and repassage

over the land specified by the statutory right of way only. The terms also stipulated that at such a time as a subdivision plan is deposited that dedicates as road all or a portion of the statutory right of way area, the City would discharge the statutory right of way. A visual inspection of the path found signage that acknowledged the right to pass along the path only, and that the land surrounding it was private property.

The Bayside case study illustrates how several processes are in progress concurrently in redeveloping sites. In this case, CNRE applied for an amendment to the OCP, requested a rezoning for the site, and developed a subdivision application guideline for future development of the site. The site requirements were complex as title was held by each of the three parties involved – CNRE, the City of Victoria, and the Province.

The OCP guideline in force at the beginning of this process mandated that the City was to focus on providing public accessibility while maintaining the environment in its waterfront areas. Through the process of negotiation, the City obtained the concession from CNRE to dedicate land to create a walkway not less than nine metres in width along the waterfront. Until such a time as development actually occurs on the site, a statutory right of way has been registered providing for an interim walkway. The need to ensure public accessibility has been met.

The requirement for ensuring that the environment is maintained must wait until development actually occurs on this site. This may not happen in the near future, as there are other sites available that offer developers more lucrative returns. The industrial history attached to the Bayside Lands, with the potential environmental cleanup that may be required, has been prohibitive in respect of developer interest to date. [89]

Summary

Two municipalities are using their Official Community Plans to provide direction for future development by establishing development permit areas. However, OCP and DP areas are not simply the domain of municipalities. In addition to Comox and Victoria, the electoral area of Sooke also demonstrated how these tools might be used in regional districts.

There was some overlap in purposes respecting riparian land in the three case studies. Both Comox and Sooke had specific requirements within their respective bylaws regarding floodplain areas. In both cases, the building of structures was restricted within a set distance from the natural boundary of a waterbody. The Sooke bylaw was found to be unenforceable in trying to remove a cabin on the floodplain. Yet, this must be looked at in context. The court decision did uphold the validity of the bylaw. The cabin was essentially viewed as a pre-existing structure. Had it been a newly built cabin on empty land subject to the bylaw, the court decision was quite clear that it would have to be removed. Further, if Smith was to attempt to get the appropriate exemptions from MELP and was rejected, then Sooke would likely have had a more success in enforcing the bylaw. The distinction between the two studies is perspective – proactive versus reactive application of a bylaw. When a floodplain bylaw affects some future use of riparian land, then the restrictions on the riparian strip will be found to be valid. However, it is much more difficult to address an existing use.

Development of land also provides means for public accessibility to be obtained by local authorities. In both Comox and Victoria, statutory rights of way registered on the title of waterfront land were required as a condition of granting development approval. Further, both jurisdictions have statements within their OCPs that indicate public ownership of waterfront strips should be sought on newly developed land. In each case, negotiation is entered into with the developer to determine which means will be used in providing access – right of way or dedication.

While not the primary focus in the case studies used, conservation of the natural riparian habitat is addressed. Comox required that the public walkway to be constructed along the dedication and the right of way was to be elevated on piles to minimize the impact on shore vegetation. Sooke required a construction setback of at least 15 metres from streams and lakes. The cabin on the plot examined in the study fronted on the sea, so this requirement was not applicable. Finally, the Victoria study has not proceeded with development and any need to review conservation issues from a policy perspective awaits future events. However, the interim measures to provide public access via a statutory

right of way has created a defined path distinct from the foreshore, which has been left in as natural a state as can be achieved in a small harbour.

The bylaws in each of the three jurisdictions show how riparian strips can effectively be used to sustain riparian areas. The mechanisms of dedication, right of way, and zoning may serve effectively in achieving an explicitly stated purpose for new developments. In order for the developer of the properties in both Comox and Victoria to proceed, they had to respond to a proactive set of bylaws with specific requirements. However, there are exceptions. In Sooke, the bylaws placed newer requirements on an existing activity – essentially a reactive response by the local authority – and it was much more difficult for the local authority to enforce.

References:

[1] c.IV. Note 1.
[2] c.I. Note 10.
[3] c.IV. Note 2. Part 16 – Divisions 3 and 4
[4] c.I. Note 10. s. 1
[5] c.IV. Note 2. s. 920(7)
[6] Town of Comox Bylaw 1249. Official Community Plan. s. 1.4.
[7] Note 6. s. 1.4.
[8] Note 6. s. 1.5.
[9] Note 6. s. 4.4.
[10] Note 6. s. 4.5.
[11] Note 6. s. 6.0. Development Permit Area No. 6.
[12] Note 6. s. 6.0. Development Permit Area No. 5.
[13] Note 6. s.6.0. Development Permit Area No. 5.
[14] Note 6. s. 4.6.
[15] Town of Comox. Comox Zoning Bylaw. s. 5.11.
[16] Note 16. s. 2 – Definitions
[17] Town of Comox, Bylaw No. 1066, 1992.
[18] Town of Comox. DP-98/6 file.
[19] Note 18.
[20] Note 18. Memorandum from Tim Hall (Planner) to Mayor and Council. Subject: Development Permit Application – DP-98/6 1757 Beaufort Avenue. September 16th, 1998.
[21] Note 18. Letter from Diane Bennewith – MELP to Town of Comox Planning Department. September 30th, 1998.
[22] Note 18. Memorandum from Tim Hall (Planner) to Mayor and Council. Subject: Development Permit Application – DP-98/6 1757 Beaufort Avenue. October 7th, 1998;
Personal Communication. February 22nd, 2000. Frank Limshue Municipal Planner, Town of Comox. Since the time the width of the dedicated walkway was changed, Tim Hall, the Municipal Planner involved with the project has left. The current planner was unaware of the change and had no explanation for why it occurred.
[23] Note 18. Note to file. Meeting with MELP and DFO. October 20th, 1998.
[24] Note 18.
[25] Note 18. Proposed Plan of Subdivision of Lot 1, Plan 15621 and Lot A, Plan 38134, both of Section 56, Comox District. Glover & Zaharko B.C.L.S. May 26th, 1999.

[26] Note 18. DP-98/6. May 31st, 1999.
[27] Town of Comox. SD-99/2 file. Letter from R. Glover (BCLS) to Tim Hall (Planner) – Town of Comox. Re: Proposed Subdivision Plan of Lot 1, Plan 15621 and Lot A, Plan 38134. July 7th, 1999.
[28] Note 27. Letter from Tim Hall (Deputy Approving Officer) – Town of Comox to Michael Collins – Braden West General Contractors. Re: Proposed Boundary Adjustment Between Lot 1, Plan 15621 and Lot A, Plan 38134. July 30th, 1999.
[29] Note 27. Fax from Gibson, Kelly & Ives – Barrister & Solicitors to Town of Comox. September 14th, 1999.
[30] B.C. Land Title Office, Victoria. EN91370. Form C – Statutory Right of Way.
[31] Note 18. Letter from 579344 BC Ltd to Helen Dale (Approving Officer) – Town of Comox. Re: Waterfront Walkway Construction – Letter of Undertaking. October 22nd, 1999.
[32] Note 27. Letter from Tim O'Brien (Landscape Architect) – Chislett Manson & Company to Helen Dale (Administrator) – Town of Comox. January 17th, 1999.
[33] c. IV. Note 1. s.95.
[34] Personal Communication. May 23rd, 2001. Ross Glover. BCLS.
[35] Note 34.
[36] Capital Regional District By-Law 1645. Sooke Community Plan. s. 1.4.
[37] Note 36. s. 1.6.
[38] Note 36. s. 1.7.
[39] Note 35. s. 2.1.2.
[40] Note 36. s. 2.1.3.
[41] Note 36. s. 2.1.5.
[42] Note 36. s. 2.1.7. and s. 2.1.11.
[43] Note 36. s. 2.9.3.
[44] Note 36. s. 2.9.3.7.
[45] Capital Regional District By-Law 2040, Sooke Land Use Bylaw.
[46] Note 45. Part 6 – s. 3.10.
[47] *Capital (Regional District) v. Smith* (1996), 33 M.P.L.R. (2d) 15 (B.C.S.C.) para. 3. The purchase of the lease was from the registered owner of the parcel.
[48] Note 47. para. 3.
[49] B.C. Land Title Office, Victoria. Plan 22722. Deposited November 24th, 1968.
[50] Note 47 para. 3.
[51] Note 47 para. 7. The present zoning Bylaw 2042 enacted in 1993 continues to maintain a maximum number of dwellings at three per parcel and the requirement for floodplain setbacks.
[52] Note 47 para. 4-5.
[53] Note 47 para. 8.
[54] Personal Communication. February 24th, 2000. Miles Drew, Chief Bylaw Enforcement Officer – Capital Regional District.
[55] R.S.B.C. 1979, c. 290.
[56] Note 47. para. 9.
[57] Note 47. para. 1.
[58] Note 47. para. 27-28.
[59] c.I Note 17. para. 1 and para. 25.
[60] c.I Note 17. para. 24.
[61] c.I Note 17. para. 25.
[62] Note 3.
[63] Personal Communication. May 23rd, 2001. Roger Allan, Senior Building Inspector – Capital Regional District.
[64] City of Victoria, Victoria Official Community Plan Bylaw No. 95-89, Consolidated Edition February 14, 1999 p. 2.2
[65] City of Victoria, Victoria Harbour Plan, Draft 2. November 1998.
[66] Note 64. p. 7.3
[67] Note 64. p. 4.3

[68] Personal Communication. June 18th, 1999. Mike Dillistone. Planner, City of Victoria. The intent of the Planning Department is that all work activities in riparian areas in the future will require a Development Permit.
[69] Note 64. p. 12.1
[70] Victoria City Council, Bylaw No. 80-159. Office Consolidation February 1999.
[71] Personal Communication. June 18th, 1999. Ian Phillops. Land Development Section , City of Victoria. The city practice is to defer to the British Columbia Land Surveyor to define the high water mark
[72] Bayside Village Design Guidelines and Planning Rationale. February 20th, 1995. p. A1:3
[73] Note 72. p. A1:3
[74] B.C. Land Title Office, Victoria. Plan VIP54427. Deposited September 15th, 1992.
[75] City of Victoria. Bayside Development File. Land Exchange Agreement between Province of British Columbia, City of Victoria, and Canadian Railway Company, June 22nd, 1992. ss. 9.2.2.
[76] Note 75. Land Exchange Agreement between Province of British Columbia, City of Victoria, and Canadian Railway Company, June 22nd, 1992. ss. 9.2.3.
[77] Note 75. Letter from Graham Ross-Smith, Gorge Waterway Action Society to the Mayor/Councillor/Staff, City of Victoria, Re: Bayside Lands Development Project (CN Real Estate). October 6th, 1994.
[78] Note 75. Note to File: Review of Guidelines and Zoning. September 22nd, 1992.
[79] Note 75. Planning Rational and Design Guidelines. July 18th, 1994.
[80] Note 75. Planning Department Bayside Subdivision Comments APC 94-41. July 19th, 1994.
[81] Note 75. Letter from B. Dale Knowlan, (Development Manager) CNRE to Mark Hallam, (Development Officer) BC Lands. Re: Bayside Lands, Victoria. August 5th, 1994.
[82] Note 75. Letter from Charles Brooks, Brooks Development Planning Inc to Ian Phillips (Land Development). Re: Proposed Subdivision. September 6th, 1994.
[83] Note 75. Letter from John H. Platinga, (Director) Parks and Recreation to Charles Brooks, Brooks Development Planning Inc. Re: Bayside Village – Proposed Subdivision Application. July 22nd, 1994.
[84] Note 75. Letter from John D. Sansom (City Engineer) to Charles Brooks, Brooks Development Planning Inc. Re: CN Real Estate, Bayside Village Development Project – Proposed Subdivision of Lot 2, DL 119, Esquimalt District, Plan VIP54427. January 31st, 1995.
[85] Note 74. Letter from Georgeann Glove (Deputy City Solicitor) to Ladner Downs, Barristers & Solicitors. Re: Bayside Lands – Master Agreement. February 6th, 1995.
[86] Victoria City Council Bylaw No. 94-176.
[87] Victoria City Council Bylaw No. 94-177.
[88] Victoria City Council Bylaw No. 94-178.
[89] Personal Communication, February 24th, 2000. Michael Dillistone, Planner – City of Victoria.

VI. SYNTHESIS

This final chapter serves three purposes. It serves as the link between the earlier chapters in providing analysis of the various triggers, mechanisms and purposes of creating riparian strips to promote sustainability. Next it assesses the case study methodology adopted. Finally, it makes recommendations for the effective use of riparian strips and suggests areas where future work may be conducted.

Analysis

This thesis began by establishing the context for riparian strips in British Columbia in terms of their effectiveness in promoting a sustainable riparian habitat. At issue is the potential conflict that can arise due to the different motivations in dealing with riparian strips. Increased urbanization has resulted in encroachment onto streams, rivers and coastal zones. In the process, the implementation of floodplain protection and drainage projects has eliminated wetlands, stream habitat, and other important fish and wildlife areas. [1] This is in direct contrast to conservation of fish habitat. Attempting to protect natural habitat in riparian areas, proceeding with measures such as dyking to reduce economic loss, and allowing recreational access suggest that the creation of riparian strips is intended to both restrict and allow access to and along water. The question is, can it do both?

In dealing with riparian strips, the key to sustainability is in balancing each requirement against the others. In approaching this issue, the questions specifically asked were **how** and **why** riparian strips have been used to promote sustainability. In terms of **how**, the approaches for creating riparian strips identified in the literature are assessed via the case studies. Inherent in the question of how riparian strips are created is the nature of the strips. **Why** riparian strips are being created at present looks to the purposes – conservation, economic, and access – defined for sustainability.

The means or mechanism is **how** riparian strips are created (Table 1). The primary means available upon Crown grant of land has been by exception. When fee simple interest is granted for a parcel of land that abuts water and the Crown wishes to retain the riparian area, the grant excepts a riparian strip. In both Crown grant case studies, a strip

of land was excepted or reserved by the Crown. The Monashee study showed a strip 66 feet in width was excepted from the grant in 1911 as authorized by the reservation provision of the *Lands Act*. In the Dean River case study, a 100 foot strip was excepted from the leasehold granted as a matter of Crown land policy. The exception of the riparian strip from the grant retained the fee simple title to the strip in the Crown.

Table 1 – Case Study Mechanisms

	Reservation	Dedication	Statutory Right of Way	Restrictive Covenant	Zoning
Monashee	✓				
Dean River	✓				
Comox		✓	✓		✓
Nanaimo		✓			✓
North Vancouver	✓			✓	✓
Sooke					✓
Victoria		✓	✓		✓
West Vancouver		✓		✓	✓

The primary method encountered upon subdivision for creating riparian strips was dedication. Four of the six municipal case studies had or intended a dedication of riparian strips within the subdivision process – Comox, Nanaimo, Victoria and West Vancouver (Table 2). The explicit empowerment of s. 941 of the *Local Government Act* provides the most concrete means available to municipalities in establishing riparian strips under their direct control – via fee simple ownership. This approach is made more effective when the municipalities include within their Official Community Plan (OCP) that subdivisions containing riparian land must dedicate all or a portion of the riparian zone as parkland. Failure on the part of the municipality to include the OCP provision

leaves the option open to any landowner subdividing to make an equivalent market value payment instead of dedicating land. The municipality cannot force the dedication in this instance.

Table 2 – Case Studies with Dedications

	Dedication (%)	Strip Width (m)	Trail (m) (distance from water)
Comox	5	6-9	2-5
Nanaimo *	35	15-28	5-20
Victoria *	10	9-24	0-15
West Vancouver	21	16-30	15-25

* proposed dedications

The only potential detriment detected with the fee simple dedication mechanism lies in the maximum of 5% that the municipality can require within the subdivision process. If a municipality wishes to acquire a riparian strip that is larger than 5% of the property being subdivided, the municipality cannot require the complete strip via dedication. However, this hurdle can and has been overcome via negotiation with the owners of the land wishing to subdivide. This is supported by the West Vancouver study with a 21% dedication and the proposed dedication of 35% in the Nanaimo study. The maximum percentage of the riparian area that municipalities can obtain is therefore not set, as it will be determined on a case-by-case basis. Negotiation is also used in the Comox study where a dedicated walkway – along with a statutory right of way on the adjacent parcel – was negotiated in the re-subdivision for the lot boundary adjustment between the two parcels. Since fewer than three new lots were created, there was no legal requirement for a dedication to be offered.

The other means available to obtain a riparian strip is similar to the exception used in the grant of Crown land. The District of North Vancouver, having obtained Lot A in Deep Cove via tax sale in 1928, reserved the Block B riparian strip of land upon subdivision of

the parcel in 1930. Thus, the District retained title to Block B in much the same manner as the Crown does with an exception on grant.

However, an important distinction must be made between a reservation and an exception. In *Gibbs v Grand Bend*, the Ontario Court of Appeal described the difference as:

> A reservation newly creates a right for the grantor and takes the right out of the grant, while an exception takes out of a grant something that is already in existence. [2]

Gibbs v Grand Bend makes the distinction that an exception retains fee simple in the grantor while a reservation merely retains a use of the land reserved. Hence, the term **reservation** can connote two meanings as used here. It may mean that a strip is excepted from a Crown grant or transfer of land with the title remaining with the Crown as noted in the Monashee and Dean River case studies or the municipality as found with Block B in North Vancouver. On the other hand, it may simply be the reservation of a use of a strip of land as suggested by *Gibbs v Grand Bend*. This second option was not noted in any of the case studies.

The lone example of a restriction being used in the subdivision process was found in the District of North Vancouver. The District imposed a restrictive covenant provision under the authority of the *Municipal Act* that prevented the upland owner from developing a portion of the land that was intended for future use as a highway. [3] Here, the tool was used to allow for the potential expansion of a waterfront walkway at some future date.

With development of land as the trigger for the establishment of riparian strips, the method of choice is not as clearly defined. The method is confined to restrictive tools, as there is no legislative authority that allows for the taking of land during the development process. Nonetheless, this does not preclude the creation of riparian strips. Restrictions were found to take three forms. First, zoning restrictions were relied upon in all six municipalities to prevent landowners from building, excavating, or removing trees in the riparian zone. This was consistent in all studies and was found in the various Official Community Plans and implemented through appropriate bylaws. Second, a positive easement, the statutory right of way, was established and registered on title in two of the

six municipal studies – Comox and Victoria. Both of these statutory rights of way were required to allow public use of the riparian area.

A third restrictive tool referred to in three of the six case studies – Comox, Victoria and West Vancouver [4] – was the restrictive covenant, insofar as either the Ministry of Environment, Lands and Parks or the Department of Fisheries and Oceans recommended its use. West Vancouver was the only municipality to implement it by requiring the developer to register a restrictive covenant on each of the six lots that overlapped the fisheries sensitive zone of Brothers Creek. Two of the lots abutting the dedication had the restrictive covenant on title as did the four lots on the southeastern portion of the development where the strip abutting the creek was not dedicated to the District. The registered restrictive covenant prevents the owner of the parcel from building, constructing or removing vegetation from the fisheries sensitive zone. It is of interest to note that the municipality did not choose to use the specialized conservation covenant version of the restrictive covenant considering the purpose was the conservation of the Brothers Creek riparian area. However, the restrictive covenant did provide the same result. The other two municipalities opted to follow policy directives that preferred that a riparian strip be dedicated and accepted.

A final means that was noted in both the literature and in the Comox Official Community Plan for obtaining riparian strips was the purchase of fee simple title of a strip. The drawback to this approach is that it may be cost prohibitive and is likely why it was not encountered in any of the case studies.

A second aspect to **how** riparian strips are created is the nature or character of the strip. A riparian strip is a piece of land between the upland parcel and the waterbody. Yet, the character and location of the boundaries of the riparian strip vary depending on which mechanism is chosen to create the strip. It is important to make the distinction between legal boundaries and topographic descriptions. At the outset of this thesis, the legal boundary for riparian parcels was given as that defined in the *Land Act* as the natural boundary located at the visible high water mark. Judicial interpretations were provided giving clarification for this definition as the mean high water mark for tidal waters, the ordinary high water mark for rivers and the water's edge for lakes. Whether a large

upland parcel or a riparian strip, the legal definition of the riparian boundary remains defined the same.

However, there is the possibility for confusion when the natural boundary is used both as a legal term and as a topographic feature. Nonetheless, the legal riparian boundary is not altered by the bylaws of the municipalities. The terms used in the case studies are topographic features for the establishment of riparian strip areas. The potential confusion with the definition of riparian strips is the possible interpretation that would create a strip within a strip. Several of the municipalities refer to the establishment of riparian strips relative to the top of bank, a feature that does not necessarily overlap with the legal boundary. Therefore, it is possible that a narrow strip could be found to exist between the legal boundary and the riparian strip that would not be subject to the strip requirements. The municipalities have consistently overcome this potential interpretation by including the intervening strip within policy requirements for setback areas. Nanaimo defines its Development Permit Area for all watercourses as including all area between the centre line of a river and the inland extent of the established riparian strips as measured from the top of bank. North Vancouver defines stream corridors as all land between the tops of bank of a stream and includes a strip of land above the top of bank on either side. Similarly, West Vancouver identifies a Creek Preservation Area as the area within the 100 year flood line for a creek plus an additional strip of land on or beyond each bank. In this manner, the topographic feature is used as a reference point only for establishing the inland extent of the riparian strip but is not itself a boundary, thus the potential for confusion is avoided. Further, the introduction of the new Streamside Protection Regulation will improve the uniformity of these definitions by providing a consistent definition for top of bank.

Of more interest to this discussion is the nature of the upland boundary associated with riparian strips that is impacted by the topographic feature. When a strip is dedicated and accepted, the case studies show that an upland parcel has a fixed boundary created along the line severing the strip from the parcel. It is the riparian strip itself that becomes the upland riparian parcel. The upland owner is no longer entitled to any riparian rights that may have been associated with the parcel prior to the dedication. The *Monashee* case

study illustrated this point quite clearly when the British Columbia Court of Appeal ruled that a reservation of a one chain strip meant that the accretion accrued to the strip, not to the upland parcel. The court ruled that the strip was a reservation that operated by way of an exception at the time of grant.

The two case studies in which statutory rights of way were created and registered on title for access purposes each had monumented boundaries. The statutory rights of way were established with definite limits as to where access was to be permitted to occur across the upland parcel. The distinction for these cases from the complete severance of the riparian strip that occurred through dedication, however, lies in the retention of the underlying land in the upland owner's title. Further complicating the issue in the Comox case study, the statutory right of way and the property were fully removed from the natural boundary. In the Victoria study, the portion of the parcel under the statutory right of way was only in contact with the natural boundary along certain portions of its length. The question then arises as to the status, if any, of the upland owner's riparian rights.

It would seem that the rights have been severed as occurs in the dedication of a riparian strip. Yet, it is not the creation of the statutory right of way that severs the riparian rights of the upland owner. The statutory right of way established in Comox already had a strip of land between the parcel in question and the natural boundary. In this case, any riparian rights formerly attached to the parcel had already been severed. The original survey plans for the site registered at Land Titles indicated that the parcel in question had a natural boundary. When the development was initiated, a new natural boundary was identified that resulted in an intervening strip of land that was questioned on survey documents as to whether it was an accretion or fill. An application to obtain the accreted land by the upland owner was rejected. However, if it had been accepted, then the statutory right of way would now exist across a riparian parcel.

The restrictive covenant established in North Vancouver to allow for future development of a waterfront walkway can be viewed in a similar manner to the Comox statutory right of way. It was the creation of the Block B strip in 1930 that severed the upland parcel. The establishment of the restrictive covenant that was subsequently monumented and

registered on title was merely to allow a future widening of Block B. It had no bearing on the location of the boundary of the parcel of land.

However, the Victoria case study that established a statutory right of way raises a more troublesome question. Portions of the property underlying the statutory right of way actually abut the natural boundary along its length. If accretion or erosion occurred in these areas then it applies to the upland riparian parcel. In this case, the upland riparian parcel remains the parcel on which the statutory right of way was granted, referring to *Monashee*. It is possible that the statutory right of way could completely erode. Conversely, if the statutory right of way was granted across a non-riparian parcel that becomes submerged, then the statutory right of way would itself become submerged. [5] The upland owner has only granted a right of access to his land through the statutory right of way, but has not relinquished his ownership of that portion of his land. If the upland parcel was originally riparian then it should retain the riparian rights.

In terms of zoning requirements, the municipalities have created explicit methods for defining riparian strips. Many of the municipalities have defined a strip that is a setback of a particular distance from topographic features like the natural boundary or in some cases from the top of bank of the adjacent waterbody. Most are variations on the *Land Development Guidelines*. While in technical terms the riparian strip boundary is adequately defined, its nature is much more complicated than the monumented boundaries previously discussed in dedications of riparian strips or in the establishment of statutory rights of way.

The application of zoning legislation is temporal. When an application for development of land is made, the requirements of the zoning legislation must be established on site for the riparian strip and the subsequent activities on the parcel must comply with the municipal bylaws. In other words, when a development is set in motion, the site is developed in relation to the riparian strip as established at that particular time. Unlike with dedication, the riparian strip that is created does not have a legal upland boundary in terms of title. Rather, the upland boundary establishes the strip of land where some restriction is imposed. The bylaws do not allow for any inference that there is a

requirement for revisiting the location of a riparian strip boundary for developments that take a significant period of time to complete.

An analogy can be made with surveying a natural boundary itself. In establishing the location of a natural boundary for a registered plan, a surveyor is only stating where it is on that particular date. In this sense, the character of riparian strip boundaries appears to assume the ambulatory nature that is inherent in watercourse boundaries. The upland boundary of the riparian strip is ambulatory in terms of zoning bylaws. [6]

Ambulatory upland boundaries are not without precedent. Ambulatory riparian areas are in use within New Zealand, [7] although it is acknowledged that they are not created through zoning. The use of ambulatory strips was introduced predominantly to provide public access along water margins, though some instances of use for conservation have also been noted. Ambulatory strips can be created both on the granting of Crown land and upon subdivision of private land. Two of the benefits noted with the creation of ambulatory strips for access purposes on subdivision in New Zealand are that the land can remain in title of the land owner excluding the local authority from responsibility for maintenance and the land owner is not cut off from water access.

One difficulty that arises in interpreting zoning riparian strips in British Columbia as ambulatory lies in the doctrines of accretion and erosion. These doctrines are complementary, because an upland proprietor is entitled to both the benefits and the liabilities of owning riparian land. Yet, upland owners have enjoyed the right of protecting themselves from erosion under the law. Therein lies the conflict. The municipalities in restricting activity in riparian areas appear to be impairing upland riparian proprietors from completing erosion preventative measures. If this intervention by municipalities is valid, then the doctrines have been modified.

All six municipalities have clearly restricted the activities in riparian strip areas through zoning bylaws. The measures range from restricting construction to requiring a permit for tree removal within the strip. This does not detrimentally impact the owner in preventing erosion for two reasons. First, the purpose of several of the zoning bylaws is to preserve the natural habitat. One impact of human interaction with watercourses is the

removal of vegetation to improve access. A byproduct is erosion. The zoning bylaws preclude this type of activity and improve the stability of the habitat. A more stable habitat is less likely to experience erosion unless the topography is already conducive to its occurrence. Second, the *Water Act* allows activity to be conducted in stream channels if an authorized government agent or engineer approves the work. [8] The ability of riparian owners to complete erosion preventative measures has therefore been curtailed but not eliminated. The effect is to regulate the application of erosion measures. Hence, the municipalities' bylaws have not modified the mutuality of the doctrines of accretion and erosion.

Thus, the ambulatory nature of zoned riparian strips is useful in terms of sustainability. On the one hand, it will allow developments to proceed and upland owners to have means to still protect themselves from the possibilities of erosion. On the other hand, it will satisfy conservation needs by requiring future developments along the same watercourse to provide sufficient setbacks if the watercourse boundaries have changed in the intervening years.

The final aspect for investigation lies in **why** riparian strips are being created – the conservation of habitat, economic loss prevention, and access purposes defined for sustainability (Table 3).

From a **conservation** perspective, any fee simple sale of Crown land in remote areas requires consultation with the Ministry of Environment regarding the potential impact on fish and wildlife management. It is unclear what the ramifications would be if the Ministry finds there is potential for impact on fish habitat. Yet, the recent Streamside Protection Regulation instituted by the Province requiring that municipalities protect riparian areas within their jurisdictions would suggest that similar measures would be required on Crown land dispositions. It follows that a reservation of a riparian strip would serve the purpose of providing for the riparian habitat and still allow the sale of Crown land to proceed. Neither Crown grant case study provided for protection of habitat. However, in each case the establishment of the riparian strip pre-dated the introduction of policies addressing these matters.

Table 3 – Sustainability Purposes met in Case Studies

	Access			Conservation	Economic
	To	From	Along		
Monashee	✓		✓		
Dean River	✓	✓	✓		
Comox			✓	✓	(✓)
Nanaimo			✓	(✓)	(✓)
North Vancouver	(✓)	✓	(✓)		
Sooke					(✓)
Victoria			✓		
West Vancouver			✓	✓	✓

( ) indicates partial fulfillment of requirement

Several of the municipal case studies dealt with conservation or protective measures through the establishment of riparian strips – Comox, Nanaimo and West Vancouver. In each case where habitat protection was a significant criterion for the municipality and subdivision occurred, the municipalities required a dedication of the riparian zone. When the amount of land exceeded that which they could protect through dedication, the municipalities relied upon the restrictive covenant and zoning legislation requirements to meet the protection needs.

The strips created were effective in conserving riparian habitat to varying degrees. The West Vancouver study shows the retention of a lush riparian habitat within an urban community. While the trail provided through the riparian zone could arguably be considered an encroachment upon the habitat, it is a natural trail constructed well set back from the water from 15 to 25 metres. Further, the criteria established for successful conservation of habitat was set as maintaining or improving the vegetation within the riparian strip. In this case, the trail was pre-existing and the placement of railings actually minimizes the impact of the trail by restricting access beyond its limits.

Similarly, the Comox study site required the establishment of a public walkway on piles to ensure that the shore vegetation was not impacted. While the subdivision in the Nanaimo case study was not completed, the plan indicates that the creek would be conserved with ample setbacks on either side. However, in this case the public pathway would be established within the riparian strip along the creek although not interacting directly with it. Even so, there would be an encroachment upon the riparian strip reducing the vegetation, and would therefore not completely satisfy the conservation aspect of sustainability.

The findings for these three studies compare reasonably well with the new Streamside Protection Regulation requirements that the municipalities must adopt within the next five years. Under the SPR, the Comox case study would likely require a minimum setback of 5 metres for a site that is well developed and on the waterfront. It did provide a dedication and a right of way that ranged from 6 to 9 metres in width. Further, the building setback was required to be 7.5 metres as per present bylaws. Both the Nanaimo and West Vancouver studies would likely be considered fish bearing streams under the SPR and due to the natural character of the area when the subdivisions were to be developed, they would require setbacks of 15 or 30 metres. In Nanaimo, the riparian strip was intended to vary in width from 15 to 28 metres. In West Vancouver, the strip width was established at 16 to 30 metres. Both study sites fit well within the SPR requirements. These three case studies indicate that current municipal policy regarding the establishment of setback widths for conservation of riparian habitat is already meeting the intended requirements of the new regulation. Where there may be potential for disagreement is in the placement of public access ways within the conservation area established by the strips.

Crown policy also addresses the **economic** component of sustainability, although not through the use of riparian strips. Any parcel that is to be sold that has been found to be prone to flooding or is in a designated floodplain must have a restrictive covenant registered on title prohibiting development. This measure is an attempt to minimize the economic loss from the effects of flooding and could impact the entire parcel sold, rather

than only a riparian strip. Neither Crown grant case study addressed potential economic loss due to flooding as it was not an issue at the time of either grant.

In terms of protecting riparian areas from detrimental economic effects, one municipal study directly considered this criteria. The Sooke study looked at an application that was made to rebuild a cabin in a floodplain area. Sooke would not authorize the rebuilding of a partially destroyed cabin, as it did not conform to building requirements in respect of floodplain restrictions. Such requirements stemmed from the possibility of economic loss that could arise from potential flood. The owner of the property rebuilt the cabin despite the objections from Sooke and the courts allowed the owner to retain his newly built cabin. The court did uphold the validity of the bylaws in this matter, however, and the reasoning for establishing setbacks in floodplain areas remains sound. In this case, the District has attempted to protect itself from potential liability from flooding via their refusal to give a building permit, initiating civil action, and the court order that requires the owner to obtain a provincial exemption from meeting the floodplain setback requirements in order to obtain a building permit.

Several of the municipalities also address elevations in relation to floodplain protection. Comox stipulates that no building may have the underside of its floor system lower than 1.5 metres above the natural boundary of the sea. If fill is used to meet this elevation, none may encroach on an established riparian strip and the fill must be adequately protected from erosion. Similarly, Nanaimo imposes a minimum level that floor systems must be above, in relation to the natural boundary of various watercourses in the municipality. If fill is required to meet the minimum elevation, then none is permitted to encroach on the established riparian strip. Sooke establishes flood construction level minimums at 3.0 metres above the natural boundary for certain designated creeks and rivers and 1.5 metres for other water bodies.

Both Comox and Nanaimo integrate the elevation requirements with the horizontal setbacks establishing riparian strips. The main focus is that construction beyond the riparian strip must be above a certain elevation and any fill must not encroach the strip. On the other hand, Sooke imposes both an elevation level and a horizontal setback to any application for construction and uses the greater elevation or distance for establishing

minimum requirements. In all instances, the use of elevations is for establishing the minimum requirements for construction in floodplain areas.

The final purpose to be considered individually is that of **access**. Access can be considered in three ways - it consists of access to water, access from water, and access along water. The Crown grant case studies show that retention of riparian strips was to serve the purpose of providing access both to and along water. The Monashee study showed an exception providing access along and to the water. Similarly, the Dean River study showed an exception to provide recreational access along and to the river for fishing purposes.

The dominant thread in the granting of Crown land abutting water in British Columbia has been providing public access. Initially, this access was only reserved along coastal waters, but with the diminishing amount of lakefront land, provincial policy was amended in the 1950s to preclude further fee simple disposition of such land.

When the *Land Act* was amended in 1970, the option for reserving a one chain strip along coastal waters was not retained. Perhaps the reason this option was no longer required was the existence of a comprehensive provincial policy regarding shoreland disposition. Policy required the preservation of recreational riparian areas, which could have made the legislative requirement redundant. In fact, the policy was continuing to evolve, as it underwent significant change the following year when individuals were no longer able to apply for the purchase of Crown shoreland. This aspect of the policy is still in effect.

The current policy continues to be to provide public access to the waters of British Columbia. This is clearly stated in the general policies where "to ensure protection of beaches and other public recreational opportunities, a minimum of 25% of the shoreland around each water body is to be retained for public use." [9] Even when leaseholds are granted on shoreland, there are provisions available within policy for reserving a public access strip along the water.

Access from water was likely the purpose of the establishment of the Block B strip in the North Vancouver study. The 1930 creation of the strip was likely intended for moorage points in the logging industry. Further, the narrow width of the riparian strip was

insufficient to serve any other purpose. In this manner, the reservation was made to provide access *from* the water for commercial purposes.

Each of the municipal studies that addressed access concerns had the purpose of creating public walkways along the water. Along the majority of each riparian strip, direct access to the water was discouraged by the nature of the construction of the path system such as providing fences or setting the trail back from the watercourse (Table 2). The Comox site has an elevated walkway and West Vancouver has a railing separating the trail from the watercourse. The trails are also set back a few metres to in excess of 25 metres from the water.

Public access along water could be ensured by obtaining riparian strips via dedication and acceptance by the municipalities, as suggested by the Comox, Nanaimo, Victoria and West Vancouver studies. Further, the use of statutory rights of way for creation of a public pathway was effectively used both in Victoria – as an interim measure that is still in use over five years after its creation – and in Comox.

In terms of the effectiveness of riparian strips in support of sustainability, current Crown policy attempts to address all three aspects identified. As policy precludes the extensive dispersal of Crown owned riparian areas into private ownership, it ensures public recreational pursuits are maintained by providing access, both to and along water. Also, if economic opportunities may exist in water fronting Crown land to be disposed of through sale, the Surveyor General will be consulted in order to determine the best way to maintain the riparian rights to that parcel. The use of a riparian strip serves this purpose. In retaining these rights in the Crown, conflict with an upland owner over potentially infringing on a right of access to the water can be avoided.

It has been shown that riparian strips are effective at sustaining each of conservation, economic loss prevention, and access. However, there is some tension between these purposes resulting from the creation of riparian strips. If recreational access is permitted, will any fish habitat be harmed? The Official Community Plan for Nanaimo stipulates that natural areas are to be protected, including fish habitat. Yet, it also has a mandate to provide the public with access to its natural areas.

Access along water can be compatible with habitat preservation and economic considerations. The West Vancouver study exemplifies the achievement of each these purposes. **Only** access along or near the water, and not directly to or from water is allowed. The access was in the form of a trail with railings set back from the water allowing the majority of the area to remain natural, thus both conserving the habitat and allowing flood protection to be maintained. Direct access to the water at this location if provided, would impact both the natural habitat and protection from flooding due to the erosive nature of foot traffic. In proceeding in the manner it has, the District of West Vancouver has a recreational walkway along the creek without sacrificing either the natural environment or reducing floodplain protection.

This does not mean that access to and from water is always incompatible with protecting the environment or limiting flood potential. For example, Nanaimo stipulates in its Watercourse Development Permit Area Guidelines (WDPAG) [10] that riparian owners are permitted to create a single trail across zoned riparian strips to access the watercourse that abuts their property. However, this pathway must meet certain criteria: only one trail may be built; it is to be used for personal, non-vehicular traffic only; it is to be less than one meter wide; no trees shall be removed in its construction; its surface must be pervious; and the overall slope must be less than 10% (if greater it must be designed to prevent erosion). Clearly, this exemption is meant to provide some balance between access to water and maintaining the natural character of the watercourse. However, this is private access from the upland riparian property to the watercourse. It is not public access. The implication is that riparian strips must serve multiple purposes. The initial reason for creating a strip may be a single purpose, but presently, the other purposes must be considered in any decision to proceed.

Public access on walkways is intended to be along the water and is meant for enjoyment of the waterfront area with respect to viewing rather than actually having physical access to the water itself. If access to the water was intended, then barriers such as fences and setting the walkway back from the water would not be part of the walkway design. Only the Dean River Crown grant study provided access directly to the water and that was for the express purpose of fishing along its length. Therefore, access along water could easily be dovetailed with the preservation of the natural environment if consideration is given to the nature of construction of the public walkway along the riparian strip.

If the walkway were placed above the topographic feature "top of bank," then the impact on habitat would likely be substantially less than if portions intruded below this point. The Comox, Nanaimo, and West Vancouver case studies each appeared to provide access along water via trails or paths that were set back some distance from the natural boundary within the riparian strip (Table 2). The Comox and West Vancouver case studies used techniques that conserved the natural habitat. Similarly, the Victoria study has a proposed walkway along the water as well. However, several areas of the walkway are to be built upon seawalls, which will be very effective for erosion purposes but will not be compatible with maintaining natural habitat. [11] Therefore, not all provision of access will protect habitat.

None of the municipal studies considered access to the water. Yet, public interest in access to the water is an important criterion, given the Crown policy to ensure that at least 25% of the shoreland around each water body is retained for public use. Further, the interest is recognized in the Nanaimo WDPAG bylaw that provides an exemption for private access to watercourses across zoned riparian strips, as long as it is within guidelines. Thus, restricting access to the water as was found in almost all the case studies,[12] is a major failing in sustainability. While it may promote the conservation aspect of sustainability, it does not diminish that failing to provide access to the water is not sustainable.

Finally, the concern regarding floodplain protection can be viewed as secondary in many instances, as guidelines for protection of natural habitat via riparian strips often exceed any requirement for setbacks for flood issues. [13] Only in those situations where

floodplain issues are the focus, as in the Sooke study, do these criteria come to the forefront. In this case, access and protection of habitat were not concerns of the District of Sooke.

Case Study Assessment

A case study approach has been adopted for this thesis due to the nature of the topic. The use of riparian strips to achieve sustainability is a contemporary issue where little control is available to the researcher. Given these constraints, the use of case studies provides the opportunity to assess replication with earlier studies and allow the extrapolation of theories. Therefore, case studies have been a useful tool for this research.

One key benefit from conducting case studies is the ability to establish replication. Four previous studies examined the conservation of riparian habitat in British Columbia. Two studies produced by the Fraser River Action Plan assessed the various mechanisms adopted by local governments for protecting the riparian environment while two other studies investigated the effectiveness of restrictive covenants for the express purpose of conservation. [14]

The two studies assessing the various mechanisms available to conserve habitat found that municipalities were designating environmentally sensitive areas within Official Community Plans (OCP), using Development Permit Areas, and establishing a range of fixed setbacks from named watercourses within OCP documents. However, there was not a uniform approach adopted by municipalities. The six municipal case studies examined here corroborate or provide literal replication for the previous findings. Each of the six municipalities is using designated Development Permit Areas that establish setbacks in identified riparian areas. Yet each has established its own criteria for setback widths and how they are to be defined.

One recommendation resulting from the studies was that zoning bylaws should be optimized to include the provisions of the *Land Development Guidelines* in the establishment of setbacks. Only two of the six municipalities (Comox and North Vancouver) examined here made reference to the *Land Development Guidelines* in establishing their riparian strip setbacks suggesting that this recommendation has not

been heeded. The present study provides literal replication that municipalities are continuing to approach conservation of riparian habitat from independent perspectives.

The other two studies investigated the usefulness of restrictive covenants placed on title to provide for conservation of habitat. One study sanctioned by the Fraser River Action Plan found that 75% of the covenanted properties in Surrey, British Columbia had encroachments into the streamside areas. It found no significant difference between encroachment on properties with and without covenants. The study concluded that covenants were not sufficient on their own to provide protection of riparian habitat. A second examination of five municipalities corroborated the results found in Surrey noting that deficiencies existed with the reliance on covenants for protection of riparian zones. It also acknowledged that covenants were but one tool for the protection of habitat and that for overall conservation, a combination of the various mechanisms may be necessary.

Of the six municipalities examined here, three addressed the conservation of the natural riparian area – Comox, Nanaimo, and West Vancouver. The restrictive covenant was only found to be in use in West Vancouver and in that case it was in conjunction with dedication and zoning. In the other two locations, the municipalities relied upon dedication and zoning to achieve conservation of the riparian area. These results support the earlier findings that covenants are insufficient on their own and should be used in conjunction with other mechanisms. Again, the case study methodology provided literal replication with earlier findings.

The final advantage to using a case study approach is that it allows the extrapolation of theory. This thesis began with the question to what extent do riparian strips promote sustainability in British Columbia. Three purposes were identified for defining sustainability – access, economic, and conservation. The case studies have allowed the extrapolation of the theory that the establishment of riparian strips is insufficient to promote sustainability of riparian areas when all three purposes are to be met.

It is clear that individually the three purposes can be achieved through the use of riparian strips. However, it is not possible to both restrict and provide the public with access to and along the water. When all three purposes are to be taken into consideration for

activity in riparian areas, only aspects of each can be provided. Two examples provide clarification. Public access to and along water could be achieved by paving over the entire riparian strip. This would also prevent economic loss, as there would be no development to become damaged in the instance of flooding. However, any habitat that was previously present would be lost. Conversely, maintaining the riparian strip in its natural vegetative state would satisfy both conservation and economic purposes but would prevent or greatly restrict public access to and along the water.

If riparian strips cannot achieve sustainability, then the focus needs to shift from attempting to provide all three aspects – access, economic and conservation – to recognizing that the three purposes must be prioritized and then met to the fullest extent possible based on the particular riparian strip being established. To some extent, this is the approach that has been found in several of the case studies. Comox, Nanaimo, and West Vancouver each has attempted to balance the need to conserve the riparian habitat with the need to prevent economic loss and provide public access along water. Using trails or paths set back from the water, providing railings, and using elevated walkways, the municipalities have provided for the conservation of the riparian area while attempting to satisfy a public interest for access near water. These sites fail to provide access directly to the water, but do attempt to meet all three criteria to the fullest extent possible. If this technique is used in conjunction with providing access to the water at intervals, then perhaps this is the best outcome that can be achieved through riparian strips in promoting sustainability in British Columbia.

Recommendations

1. Require minimum riparian strip widths

The studies indicated two different strip width categories- those that meet or exceed the *Land Development Guidelines* and those that establish a narrower strip. Two factors contribute to the width that should be adopted for a riparian strip in promoting sustainability – topography and the type of access permitted to the strip. Nanaimo and West Vancouver provided for riparian strips that were in excess of 15 metres in width. This width satisfies the requirements of the *Land Development Guidelines* for the conservation of riparian habitat. A narrower strip width was accepted in Comox and yet

it appears to provide adequate protection of habitat with only a 6 metre strip as measured from the natural boundary.

The important distinction between these two sets of strips is the nature of the topography of each of these sites. The Nanaimo site is relatively flat and a narrower strip could potentially suffer from erosion if development were allowed too close to the water. The Comox and West Vancouver studies are located along steeper banks. Further, the Comox site is located within the downtown area and was not heavily covered with vegetation prior to development. A path is planned along the water in the Nanaimo study but as it has not been implemented, its impact cannot be accurately assessed. Both Comox and West Vancouver have access pathways within the riparian strips but these are elevated or fenced and this type of access has less impact on habitat. Therefore, the minimum strip width will be dependent on the immediate riparian environment and should not be less than 5 metres in width. For conservation purposes the strip width may be larger to provide sufficient habitat protection as dictated by consultation with the Ministry of Environment, Lands and Parks. This minimum is in agreement with the required minimum established in the new Streamside Protection Regulation.

2. Use appropriate construction techniques for pathways

Restricting access for conservation purposes is not compatible with allowing complete access for recreational pursuits in terms of sustainability. However, access to and along riparian areas need not be in complete conflict with providing protection to natural habitat as long as adequate measures are taken in the construction of the walkway.

Two means can be used to lessen impact when providing access. First, the walkway can be set back some distance from the water, at the very least above the top of the bank, but preferably further back to minimize impact. Second, the walkway should be constructed in a manner that encourages access along the water but discourages access to the water. The use of fences and railings is effective as found in West Vancouver. If a walkway must encroach more closely upon the riparian habitat, then it should be elevated on pilings to minimize this impact as in the Comox study.

When access to the water is required in riparian strips that have been identified for conservation purposes, either the guideline for private access trail construction as outlined in the Nanaimo WDPAG bylaw should be followed or elevated piers projecting into the water should be used. Both techniques would constitute an encroachment into the riparian strip but would minimize the impact of public access as much as possible.

Future Work

What follows are some questions that arose from this work and work of others that have yet to be addressed. Further research on each of these questions would be beneficial.

1. Crown policy allows for the creation of riparian strips upon grant of land. An investigation of the extent to which this policy is implemented would be useful. For instance, the number of grants that are actually allowed in riparian areas, and the percentage that impose a reservation or restriction should be assessed.

2. The Streamside Protection Regulation under the *Fish Protection Act* approved in January 2001 will yield a more uniform approach to how municipalities deal with riparian areas for habitat protection. Municipalities have five years to implement the provisions. An examination of how these regulations designed to improve fish habitat protection will impact access to and along riparian areas would be beneficial.

3. This thesis focused on the effectiveness of riparian strips through a case study approach. Previous studies that assessed the frequency of use of the various mechanisms available to establish riparian strips have had a focus on conservation. An assessment of the frequency of riparian strip use for providing public access and preventing economic loss would expand the current availability of information that has had this conservation focus to date.

4. The context for this analysis has been within the province of British Columbia. Yet, the creation of riparian strips in providing sustainability would find similar application in other provinces. Conservation of riparian habitat is necessary across Canada as section 35 of the *Fisheries Act* is not limited to British Columbia. Similarly, neither the public interest in minimizing economic losses due to floodplain construction nor maintaining a public right to access water bodies is an interest

restricted to one province. Hence, this work can be applied to an assessment of the use of riparian strips in achieving sustainability in other provincial jurisdictions.

Conclusion

When subdivision is used as the trigger for creating riparian strips, the municipalities use the dedication of land as an effective tool. When no subdivision takes place, then development restrictions can create riparian strips. In these situations, the tools of reservation, dedication, statutory rights of way, covenants and zoning bylaws used as a set can provide access to and along water, conserve natural habitat or promote floodplain protection reducing economic loss.

Yet, sustainability is not one-dimensional. This thesis defined sustainability as meeting all three purposes – conserving habitat, preventing economic loss, and allowing access. Using these criteria, riparian strips cannot promote sustainability, even if adequate forethought is provided in their implementation. Only aspects of each can be met when looked at as a whole.

Therefore, there needs to be a shift in focus when attempting to sustain the riparian environment. Municipalities do have sufficient tools to have riparian strips maximize each of these purposes by establishing priorities. If access directly to the water is sacrificed, then one can have a public pedestrian access way along water that is known fish habitat and where the potential for economic loss is minimized. The key is in providing a properly constructed pathway that is sufficiently set back from the water to encourage access only along its length. If the focus is to provide public access to the water directly, then it needs to be recognized that habitat will suffer through the degradation of natural vegetation as a result of that access. Riparian strips cannot serve all three purposes completely.

Ultimately, each of the purposes identified as requirements of sustainability – access, conservation, and economic loss prevention – are intended to serve a public good. In establishing riparian strips in pursuit of these purposes, the public is taking possession of the shores and attempting to maximize their use for all, both present and future generations.

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[1] Ministry of Environment, Land and Parks. 1993. *State of the Environment Report for British Columbia*. p.94.

[2] (1995), 26 O.R. (3d) 644 (Ont. C.A.) para.1

[3] Now section 539 of the *Local Government Act*

[4] Nanaimo mentions covenants in the name of the City, Province or non-governmental organization as a possible means to protect riparian environmentally sensitive zones but these were not discussed in the case study as a tool for use.

[5] *Volcanic Oil and Gas Co. v. Chaplin* (1914), 31 O.L.R. 364, (Ont. C.A.); reversing on the basis of facts not being proved (1912), 27 O.L.R. 484 (Div. Ct.); affirming (1912), 27 O.L.R. 34 (King's Bench).

[6] c.IV. Note 68. The District of West Vancouver requires that lapsed development permits cannot be renewed. A new development permit application must be made and all criteria must be re-established. If the setback conditions have changed, then the new criteria would be used in the development if approved.

[7] c.III. Note 26.

[8] c.V. Note 2. s.9

[9] c. III. Note 15. Appendix I. s.2.0(a).

[10] c.IV. Note 5.

[11] CN Real Estate. 1995. Bayside Village Design Guidelines and Planning Rationale. February 20th, 1995.

[12] c. IV. Note 41. The North Vancouver strip was purported to have provided access to and from the water for log booming.

[13] Personal Communication. Harriet Rueggeberg. Environmental Planner, Strategic Planning Department. City of Nanaimo. June 14th, 1999.

[14] c.II. notes 65-68.

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APPENDIX A: LEGISLATION

Federal

Fisheries Act R.S.C. 1985. Chapter F-14

Navigable Waters Protection Act R.S.C. 1985. Chapter N-22

British Columbia

Assessment Act R.S.B.C. 1996 Chapter 20

Crown Lands Act, 1908

Fish Protection Act S.B.C. 1997 Chapter 21

Sensitive Streams Designation and Licensing Regulation 89/2000

Streamside Protection Regulation 10/2001

Land Act R.S.B.C. 1996, Chapter 245

Land Act Amendment Act, 1906

Land Act Amendment Act, 1910

Land Ordinance, 1870 (pre-Confederation)

Land Ordinance Amendment Act, 1873

Land Title Act R.S.B.C. 1996. Chapter 250

Local Government Act R.S.B.C. 1996. Chapter 323 (formerly *Municipal Act*)

Water Act R.S.B.C. 1996. Chapter 483

West Coast National Park Act, S.B.C. 1969. Chapter 41

Municipal Bylaws

Comox

Official Community Plan. Bylaw No. 1249
Tree Cutting Bylaw. Bylaw No. 1066, 1992
Zoning Bylaw, 1984. Consolidated November 1998

Nanaimo

Plan Nanaimo. Bylaw 6000.
Subdivision Control Bylaw No. 3260.
Zoning Bylaw No. 4000.

North Vancouver (District)
Environmental Protection and Preservation Bylaw 6515
Official Community Plan. November 1991
Subdivision Control Bylaw 2169

Richmond
Official Community Plan

Sooke
Sooke Community Plan. Capital Regional District By-Law 1645.
Sooke Land Use Bylaw. Capital Regional District By-Law 2040

West Vancouver (District)
Creeks Bylaw By-law No. 3013
Official Community Plan Bylaw No. 3413, 1988

Victoria
Official Community Plan Bylaw No. 95-89. Consolidated February 14, 1999
Zoning Regulation Bylaw No. 80-159. Consolidated February 1999.

APPENDIX B: TABLE OF CASES

A.G.B.C. v. Miller (1974), 45 D.L.R. (3d) 376

Bignell Enterprises v. District of Campbell River (1996), 34 M.P.L.R. (2d) 193 (B.C.S.C.)

Burns v. Comox (Town) Approving Officer (1997), 45 M.P.L.R. (2d) 104.

Capital (Regional District) v. Smith (1996), 33 M.P.L.R. (2d) 15 (B.C.S.C.)

Capital (Regional District) v. Smith (1998), 49 M.P.L.R. (2d) 159 (B.C.C.A.)

Dunstan et al. v Hells Gate Enterprises Ltd et al. (1985), 22 D.L.R. (4th) 568 (B.C.S.C.)

Esquimalt and Nanaimo Railway v. Treat [1919-v3] W.W.R. 356 (P.C.)

Gibbs v. Grand Bend (Village) (1995), 26 O.R. (3d) 644 (Ont. C.A.)

Kennedy v. Husband [1923] 1 D.L.R. 1069 (B.C. Co. Ct.)

Monashee Enterprises Ltd v. Minister of Recreation and Conservation (B.C.), (1978) 7 R.P.R. 197 (B.C.S.C.)

Monashee Enterprises Ltd v. Minister of Recreation and Conservation (B.C.), (1981) 21 R.P.R. 184 (B.C.C.A.)

R. v. Basso May 29, 2001. (Docket: 21832 & 21833; Registry: Prince Rupert)

R. v. Bowcott October 6, 1998. (Docket: CC971158; Registry: Vancouver)

R v. Crestbrook Forest Industries June 12, 1998. (Docket: 1121; Registry: Invermere)

R. v. Fraser River Harbour Commission (1983), 3 F.P.R. 398 (B.C.Co.Ct.)

R v. Posselt Logging May 17, 1999. (Docket: 14890; Registry: Smithers)

R v. West Fraser Mills (1992), 10 C.E.L.R. (N.S.) 124 (B.C.Prov.Ct.)

R. in the Right of British Columbia v. Ogopogo Investments et al (1980), 23 B.C.L.R. 43

*Volcanic Oil and Gas Co. v. Cha*plin (1914), 31 O.L.R. 364, (Ont. C.A.); reversing on the basis of facts not being proved (1912), 27 O.L.R. 484 (Div. Ct.); affirming (1912), 27 O.L.R. 34 (King's Bench).

APPENDIX C: CONTACTS

Municipalities

Comox

Tim Hall, Municipal Planner

Frank Limshue, Municipal Planner

Nanaimo

Harriet Rueggeberg, Environmental Planner, Strategic Planning Department

North Vancouver (District)

Stephen Fleming, Freedom of Information and Records Co-ordinator

Bill Rimmer, Assistant Manager, Lands

Capital Regional District (Sooke)

Roger Allen, Senior Building Inspector

Miles Drew, Chief Bylaw Enforcement Officer

Victoria

Michael Dillistone, Planner

Ian Phillips, Land Development Technologist

West Vancouver (District)

Lora Lee Richard, Planner, Zoning & Development

Other

Ross Glover, BCLS
Jaqueline Gore, Coordinator, Deep Cove & Area Heritage Association
Charles Hamfeldt, Vancouver Port Authority
Erik Karlson, Director, Special Projects – Ministry of Municipal Affairs
George Miller, BCLS
John Tarrant, Vancouver Port Authority

APPENDIX D: MUNICIPAL QUESTIONNAIRE

Municipal Policies & Bylaws

1. What town plans/bylaws under authority of the Municipal Act have been created/enacted to establish riparian reserves?

2. What is the distinction between municipal and regional responsibility when dealing with riparian reserves? (Can they overlap?)

3. What land use change allows the implementation of riparian reserves?
   – Subdivision
   – Development Application
   – Rezoning Application
   – Building Permit Approval
   – Other

4. If there is a policy in place to obtain title to land within riparian areas:

   a) What is the purpose of obtaining title?
   – Conservation
   – Recreation
   – Access
   – Protection
   – Other

   b) What means are used to obtain title?
   – Expropriation
   – Dedication
   – Environmental Reserve
   – Parkland
   – Other

5. If the policy is to have these riparian areas remain in private hands, and merely restrict activity:

   a) What is the purpose of doing so?
   – Conservation
   – Recreation
   – Access
   – Protection
   – Other

b) What means are used to restrict activity?
– Zoning
– OCP Policies
– Development Permit Areas
– Density Bonuses
– Right of Way
– Easement
– Restrictive Covenant
– Other

6. Are Tax Incentive provisions under the Municipal Act for establishing covenants on private land used?

7. For non-riparian properties that are still close to the water (ie property that abuts a 3 metre public trail along water), do policy/requirements in questions 4 & 5 still apply?

Definitions

1. In establishing riparian reserve strips, what definition is used to determine the boundary? (both conceptually on paper, and on the ground)

2. What is the extent that the riparian strip extends from this boundary?

   Is the upland boundary of this strip fixed at creation?

3. Are erosion protection measures allowed by private land owners, such as building a seawall (or something of this nature) when riparian strips have been placed on property?

   If NO, then does the restricted zone move with the encroaching natural boundary?

4. If accretion occurs along natural boundary, are the restrictions enforced from the original boundary, or the new boundary location?

Do you wish to receive a copy of the results of this research?

YES _____ NO _____

Thank you for your assisting me in this endeavour.