

A Resource Guide to

Collaborative Conservation Planning



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Published by

Galiano Conservancy Association

Acknowledgements

This Resource Guide is part of the Collaborative Conservation Planning Project of the Galiano Conservancy Association. Formed in 1989 as an instrument for community-based acquisition, management and conservation of land and habitat, the Galiano Conservancy has become a broad-based organization whose primary purpose is "To preserve, protect and enhance the quality of the human and natural environment" on Galiano Island. From its beginning, the Conservancy has been devoted to:

- 1) Land and marine conservation
- 2) Stewardship and restoration; and
- 3) Environmental education and public awareness

Thanks are given to Keith Erickson, Conservation Coordinator of the Galiano Conservancy Association, who managed this project, and Ken Millard, Coordinator and board member, who, along with Keith provided information about the collaborative planning process for the Galiano Learning Centre. Thanks also go to Drs. Eric Higgs and Loren Wilkinson who both participated in and shared insights on the collaborative planning process.

Finally, a special thanks to the Real Estate Foundation of British Columbia for financial support for this project.



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Cover photo by Rene Zich: Galiano Learning Centre shoreline

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Executive Summary

Landowners and conservation organizations provide key protection for ecosystem connectivity in endangered landscapes alongside acquisitions by provincial and local government. Conservation planning and management practices have evolved to acknowledge that ecosystem protection is rooted in social as well as ecological systems. This attention to the connection between human and ecological communities, particularly in rural and island regions, has expanded the notion of sustainability to include economic development within the parameters of ecosystem-based management, or conservation planning with social enterprise layered on top. Conservation organizations are developing new models of landholding and governance that apply ecosystem-based management approaches to sensitive landscapes.

The purpose of this resource guide is twofold: (1) to explain the principles and processes of socio-ecological conservation planning for ecologically important landscapes; and (2) to explore some of the complex regulatory processes involved in integrated mixed-use enterprises. Using the recent experience of the Galiano Conservancy Learning Centre, elements of other land conservation enterprise models are also highlighted as examples of community enterprise. The resource guide provides examples of different models for conservation planning that demonstrate multiple-use land management models that directly contribute to regional conservation priorities as well as to local socio-economic objectives for sustainable communities.

Conservation planning “...is the process of locating, configuring, implementing and maintaining areas that are managed to promote the persistence of biodiversity and other natural values.”¹ It begins at the regional scale with the identification of key ecosystem features and biodiversity corridors. Conservation planning principles include:

Protect ecosystem function before integrating other uses of the land
Protect and restore ecological connectivity and biodiversity, and the full range of composition, structure, and function of natural plant communities and animal habitats and ranges
Ensure that the conservation planning process is collaborative – that it protects and restores Indigenous uses of the land and includes a variety of values and interests
Provide for ecologically sustainable regional or island economies
Apply the precautionary principle to all plans and activities and practice adaptive management

¹ Pressey, Robert L et al. (2007). “Conservation Planning in a Changing World” 22:11 *Trends in Ecology and Evolution* 583.

The process of conservation planning ideally begins with identifying sensitive ecosystems and elements and continues in perpetuity through monitoring, evaluation and adaptive management. Mapping is crucial for identifying biodiversity sites and connectivity corridors, and establishing priorities for land acquisition.

As with conservation planning, the process of determining the appropriate mix of uses and activities on a site is a collaborative effort that should take into account community interests and stakeholder values. By involving the broader community in management planning, more information about the site and its role in the region is brought to the table. Community members and local governments can also gain a better understanding of the motivation behind the planning process and potential changes on the site.

In a rural setting the social and economic goals of integrated land use are often based on the kinds of activities that can be sustained from the site itself. For example, agricultural production often supports daily activities as well as caretakers and others who live on the site. Ecosystem-based forestry of trees on a site can support value-added enterprises of wood milling and product manufacturing. Educational activities can contribute to the knowledge and monitoring of the site, as well as generate revenue for the overall activities.

Implementation of mixed-use conservation planning requires a variety of regulatory approvals from local and senior governments. In particular, local government zoning regulations control what uses are allowed on a property, and how much of that use is permitted. Local governments have considerable discretion to approve uses of land, and can permit mixed-use zoning tailored to conservation planning efforts where a variety of uses are permitted within certain zones on one property. Typical mixed-use zoning for conservation includes agriculture, eco-forestry, value-added processing, education, public events, residential and home based business.

Other regulatory approvals that may be implicated in conservation management include potable water, building permits, and liquid waste (sewage). In addition, a variety of regulatory and fiscal tools can assist conservation planning. These include official community plans, development permit areas, development cost charges, conservation covenants, leases and mortgages.

Finally, land acquisition and management usually requires a corporate structure, such as a non-profit organization, cooperative, or company, as the legal entity through which activities can take place. Through this corporate structure the business model or operationalization of conservation management plans can involve several corporate structures (governance and financing), legal arrangements such as use of land secured by leases, and funding sources. As each property is unique, so too is each business model adopted by conservation organizations.

Introduction

Human cultures and their economies depend on intact, natural ecosystems and their biological diversity, in other words, on natural capital. Planning human activities that protect, maintain, and, where necessary, restore ecosystem integrity and biodiversity is the basis for developing enduring, sustainable human economies and cultures. Such activities are ecologically responsible, because they ensure that ecosystem components and processes continue to support the full range of life.²

By contributing to the economic base of regions, ecotourists/recreationists can influence the protection of land and biodiversity on a landscape scale, contributing to ecosystem management. The human dimensions of land preservation and biodiversity protection are key to long-term sustainability, and ecotourists/recreationists can be one management option.³

Over the last twenty-five years, private land conservation by individuals, land trusts, and other non-profit organizations has played an important role in protecting sensitive ecosystems and safeguarding biodiversity.⁴ Landowners and conservation organizations have provided key protection for ecosystem connectivity in endangered landscapes alongside acquisitions by provincial and local government. The need to protect representative sensitive ecosystems is well recognized in British Columbia (B.C.). In the southwest of the province, high diversity of ecosystems and human population are concentrated in small areas, and land development has rendered some ecosystem types at risk. For example, 80 percent of the Coastal Douglas-fir Zone is privately owned, with only 9 percent held as provincial Crown land and 11 percent by other levels of government.⁵ Garry oak ecosystems in the same region take up just five percent of their original landscape.⁶ The provincial government recognizes the vital role of local governments and non-governmental organizations in fulfilling identified conservation goals.⁷

Simultaneously, conservation planning and management practices have evolved to acknowledge that ecosystem protection is rooted in a social as well as an ecological

² Silva Forest Foundation. <http://> Accessed June 11 2013.

³ Joanna Burger (2000). Landscapes, Tourism and Conservation 249(1-3) *Science of the Total Environment* 39.

⁴ For example, in B.C. the Galiano Conservancy has been acquiring properties since 1989 and The Land Conservancy since 1997.

⁵ McConkey, D. (2011). Coastal Douglas Fir Stewardship Workshop Summary (Victoria: Ministry of Forests, Lands and Natural Resource Operations).

⁶ Maslovat, C. J. Miskelly and D. Polster (2013). *Best Management Practices for Garry Oak and Associated Ecosystems* (Victoria: Garry Oak Ecosystem Recovery Team) at 4.

⁷ McConkey, D. (2011). Coastal Douglas Fir Stewardship Workshop Summary (Victoria: Ministry of Forests, Lands and Natural Resource Operations).

system.⁸ The human community of the protected landscape is an important component of conservation planning and management. Planning for the socio-ecological system means that cultural and natural values are intertwined, and conservation areas should support local communities.⁹ One of the guidelines from the 2012 International Union for the Conservation of Nature report is to “[c]ontribute to sustainable livelihoods for indigenous peoples and local communities dependent on the protected area”.¹⁰ This approach responds, in particular, to the problem that conservation efforts often lack acceptance or buy-in by local communities. This can be addressed by integrating conservation efforts, through partnerships, into local institutions and initiatives.¹¹

This attention to the connection between human and ecological communities, particularly in rural and island communities, has expanded the notion of community sustainability to include economic development within the parameters of ecosystem-based management, or conservation planning with social enterprise layered on top.¹² It is here that we return to those individuals and conservation organizations that are using private land protection to further biodiversity and ecosystem connectivity goals. They are developing new models of landholding and governance that apply ecosystem-based management approaches to sensitive landscapes. Human uses that promote sustainable communities are nested within these managed landscapes. These uses include land conservation and restoration, education, agriculture, renewable energy systems, and small-scale businesses such as eco-forestry. These governance arrangements can also promote adaptation within ecosystem-based management.¹³ In short, evolving planning practice recognizes that there is a fine line between culture and nature, and that in a rural or island community setting ecosystem-based management can include human enterprise that contributes to sustaining the human economy.

In support of government land protection initiatives, or where they are absent, private land conservation provides a model for rural ecosystem connectivity that enables appropriate human land uses. It is widely applicable for any ecosystem that is disturbed, has significant population pressures, and where land values are high. These criteria are widely prevalent in southern B.C., where ecosystems diversity and

⁸ See, for example, Berkes, F., J. Colding and C. Folke (2003). *Navigating Social-Ecological Systems: Building Resilience for Complexity and Change* (Cambridge: Cambridge University Press).

⁹ Keenleyside, K.A., N. Dudley, S. Cairns, C.M. Hall & S. Stolton (2012). *Ecological Restoration for Protected Areas: Principles, Guidelines and Best Practices* (Gland, Switzerland: International Union for the Conservation of Nature). <http://data.iucn.org/dbtw-wpd/edocs/PAG-018.pdf>

¹⁰ *Ibid* at 20.

¹¹ Russell, Dianne & Camilla Harshbarger (2003). *Groundwork for Community-Based Conservation: Strategies or Social Research* (Oxford: AltaMira Press).

¹² For the application of these principles in the forestry context see Herb Hammond (1991). *Seeing the Forest Among the Trees: The Case for Wholistic Forest Use* (Gabriola Island: New Society Publishers).

¹³ Folke, C., T. Hahn, P. Olsson, and J. Norberg (2004). “Adaptive Governance of Socio-Ecological Systems.” *30 Annual Review of Environment and Resources* 441–73.

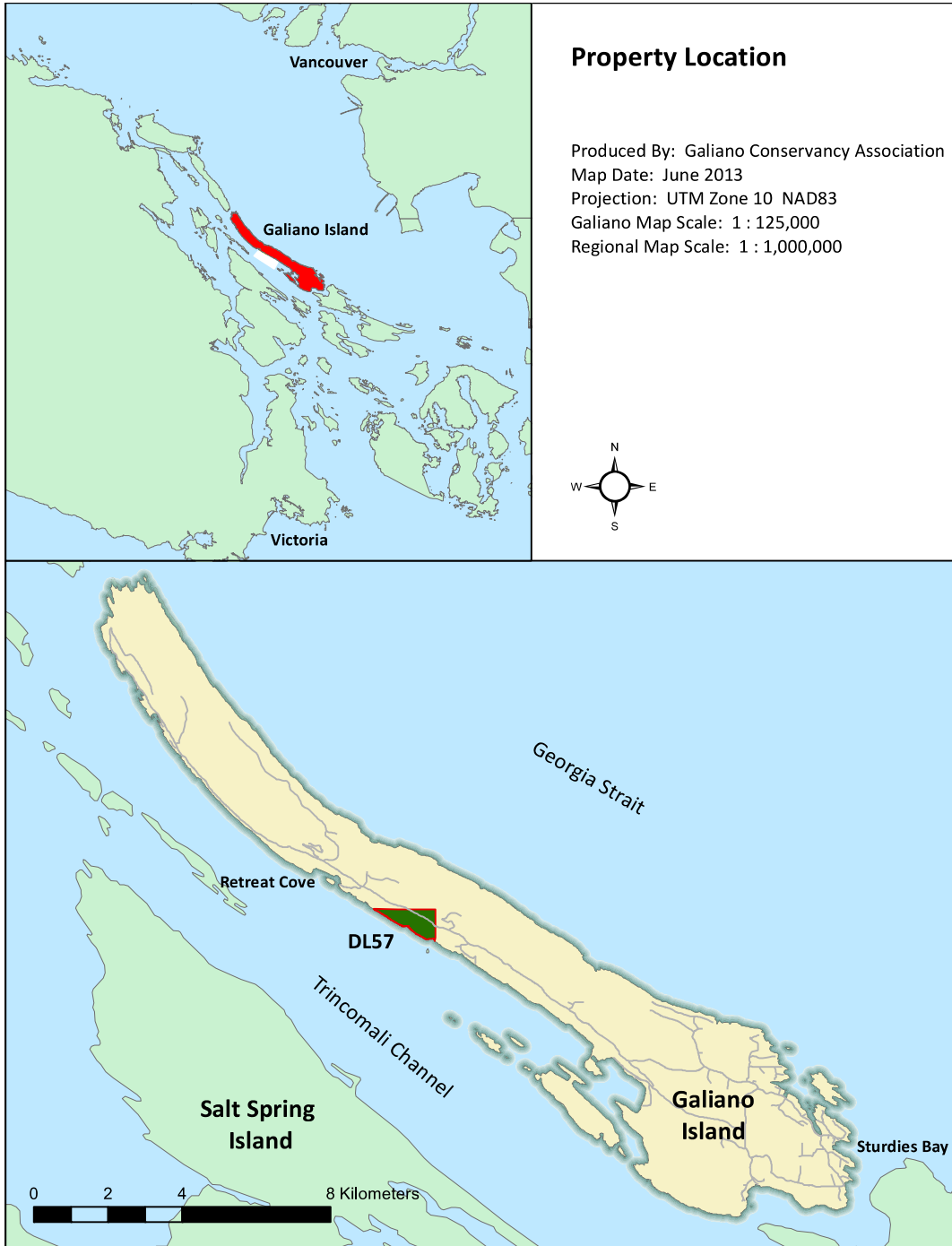
concentration of land uses are high. This includes the Islands Trust area, Fraser Valley, Eastern Vancouver Island, Okanagan Valley, and pockets in the Kootenays and Cariboo.

The purpose of this resource guide is twofold: (1) to explain the principles and processes of socio-ecological conservation planning for ecologically important landscapes that are intact or will be restored; and (2) to explore some of the complex regulatory processes involved in integrated mixed-use enterprises. This includes documenting the link between land stewardship projects and regional conservation strategies, policies for living landscapes that enhance or maintain biodiversity and ecosystem connectivity, effective consultation strategies for project proponents, and successful rezoning processes in collaboration with local and regional governments. The resource guide provides examples of different models for conservation planning that demonstrate multiple-use land management models that directly contribute to regional conservation priorities as well as to local socio-economic objectives for sustainable communities. It focuses on the recent experience of the Galiano Conservancy Learning Centre, but elements of many land conservation enterprise models are also highlighted.

The Galiano Conservancy recently purchased District Lot 57 (DL57), a 188 acre waterfront parcel located approximately half way up Galiano Island on the west side. With approximately 2 kilometres of shoreline and a diversity of ecosystems, the property protects sensitive Coastal Douglas-fir ecosystem. This ecologically unique property helps to complete identified mid-island connectivity goals through an ocean-to-ocean corridor across the Island. It is currently zoned for rural residential and agricultural use, and the business plan calls for the creation of the Galiano Learning Centre. To this end, it provides a model for a resilient organization by allowing the Galiano Conservancy to continue to fulfill its conservation and education mandates, while also providing a base from which it can generate revenue for further land acquisitions and programming. The property also enables the Conservancy to explore food security, sustainable infrastructure systems for energy and water, and create social enterprise as a contribution to the wider community. The acquisition was accomplished with matching funds from the Natural Areas Conservation Program, administered by the Nature Conservancy of Canada (NCC), and a loan from the Vancity Resilient Capital guaranteed by many individuals, as well as private donations.

“The kinds of activities that will occur on the site are important not only because they might produce income but also because they begin to create a model of how we might bring together natural systems and human systems in ways that are mutually reinforcing. This points to the Galiano Conservancy’s larger purpose of educating people in their relationship to the natural world.”

- Loren Wilkinson, Board Member Galiano Conservancy Association



The intent of this project is twofold: (1) To support non-governmental organizations and local and regional government agencies to promote sustainable community development initiatives while protecting ecologically sensitive landscapes; and (2) To meet regional biodiversity goals on Galiano Island, on other islands in the Islands Trust Area, and on private land in communities throughout B.C. While this resource

guide is not definitive, it provides direction to conservation groups and other organizations embarking on this important approach to land stewardship.

Part 1 sets out the principles of conservation planning, and discusses the need for monitoring, plan adaptation, and business planning. Part 2 explains approaches to integrated land use where a variety of complementary conservation, restoration, agricultural, educational and business uses occur simultaneously on a property. This section also explores the collaborative stakeholder-involved conservation planning process. Part 3 explains mixed-use zoning and other mandatory regulatory approvals such as for potable water and sanitation. Part 4 sets out other mechanisms for supporting conservation planning. These include official community plans and local government regulation, conservation covenants, leases and mortgages. Finally, Part 5 presents several different business models and their components as examples of how collaborative conservation enterprises occur for different pieces of land.

It is important to note that this resource guide explicitly takes into account the context of a changing climate and the need to plan for active biodiversity that is generated and maintained by natural processes.¹⁴ Those natural processes require enough land area and connection to larger ecological systems in order to adapt. The approach to ecosystem protection set out in this resource guide addresses ecological resilience through landscape connectivity, carbon sequestration through restoration, and minimizing carbon footprint through the use of sustainable agriculture and energy systems.

1. Conservation Planning

Conservation planning “...is the process of locating, configuring, implementing and maintaining areas that are managed to promote the persistence of biodiversity and other natural values.”¹⁵ From the perspective of conservation organizations and local governments looking to acquire properties for protection and sustainable uses, conservation planning begins at the regional scale and winds its way down to a specific property on the landscape through the application of ecological protection and socio-ecological sustainability goals. It is only within the context of regional biodiversity connectivity planning that landscape level land protection priorities emerge. Within that context, this Part sets out principles and considerations for the process of conservation planning. It also addresses some elements that are integral to any mixed-use planning activity that is based on ecosystem-based management – monitoring and evaluation, and plan adaptation.

¹⁴ Pressey, R.L., M. Cabeza, M.E. Watts, R.M. Cowling and K.A. Wilson (2007). “Conservation Planning in a Changing World” 22:11 *Trends in Ecology and Evolution* 583-592.

¹⁵ Pressey, Robert L et al. (2007). “Conservation Planning in a Changing World” 22:11 *Trends in Ecology and Evolution* 583.

1.1 Principles of Conservation Planning

The principles of ecosystem-based conservation planning can be summarized as follows (and are discussed in the context of the process of conservation planning under Part 1.2):¹⁶

Protect ecosystem function before integrating other uses of the land

Protected areas are the foundation of ecosystems and biodiversity. They represent regional biodiversity and also protect that biodiversity from threats such as urban development or land clearing.¹⁷ Preserving the core reserves and biodiversity corridors between those core reserves is the overarching mandate of conservation planning. Indeed there is a hierarchy where the economy is set within culture, and both are nested within the ecosystem as a foundation. Once this is accomplished, given an understanding of regional ecological processes and adaptation parameters, conservation planning can then determine whether it is appropriate to include other sustainable land uses on a parcel.

Protect and restore ecological connectivity and biodiversity, and the full range of composition, structure, and function of natural plant communities and animal habitats and ranges

Conservation planning reflects the ecological state of a region. Priorities for protection are established by evaluating biodiversity from a regional to landscape scale and ensuring appropriate ecosystem representation and connectivity through conservation. Regional connectivity requires the establishment of priorities for local or site-specific acquisitions as these should ideally both protect important ecosystem elements and also contribute to regional connectivity.

Ensure that the conservation planning process is collaborative – that it protects and restores Indigenous uses of the land and includes a variety of values and interests

Conservation efforts have been criticized as exclusive of the larger socio-ecological community in a region.¹⁸ The response has been to promote further collaborative planning for specific sites that involves all the community members – First Nations,

¹⁶ Pressey, Robert L et al. (2007). "Conservation Planning in a Changing World" 22:11 *Trends in Ecology and Evolution* 583.

See also Herb Hammond (2009). *Maintaining Whole Systems on Earth's Crown: Ecosystem-Based Conservation Planning in the Boreal Forest* (Gabriola Island, B.C.: New Society Publishers), and The Nature Conservancy's conservation planning framework at <http://www.conservationgateway.org/ConservationPlanning/Pages/conservation-planning.aspx>.

¹⁷ Margules, C.R. & R.L. Pressey (2000). "Systematic Conservation Planning" 405 *Nature* 243.

¹⁸ See, for example, the federal government's abandonment of a plan to establish a national park in the South Okanagan-Similkameen region. J. Sharkey "Parks Canada Walks Away from National Park Plan" CBC Online February 1 2012 <http://www.cbc.ca/news/canada/british-columbia/story/2012/02/01/bc-no-national-park.html>. See also Jansujwicz, J.S. & A.J.K. Calhoun (2010). 'Protecting Natural Resources on Private Lands: The Role of Collaboration in Land-use Planning' in S.C. Trombulak & R.F. Baldwin, eds, *Landscape-scale Conservation Planning* (New York: Springer) 205.

community organizations, conservation groups, businesses, local and provincial government staff, and neighbours - that identify as having an interest in the property. The interest may be cultural, for example the First Nation on whose traditional territory the property lies, or historic, such as a family that had access to a swimming hole on the property. Alternatively, it may be an economic interest, as businesses or individuals may hold legal use rights to natural resources on the land. As discussed below, the more representative the resulting planning and management plans are, the better they reflect not only the ecological goals for the property but also the social and economic potential as well.

Provide for ecologically sustainable regional or island economies

Once core ecological protection is established, the social and economic uses of the property can contribute to a sustainable regional or island economy. Depending on the location of the land and its properties, it can support a range of activities. Typical uses for conservation properties include education, retreats, agriculture, food services, community events, small scale enterprise, and home-based service businesses. Value-added enterprises often involve value-added processing of primary agricultural and natural resource products taken from the land.

Apply the precautionary principle to all plans and activities and practice adaptive management

Finally, two overarching sustainability approaches ground these landscape-specific principles. The precautionary principle requires action to protect the environment when there is serious threat of harm or irreversible damage even where scientific information is unavailable or inconclusive.¹⁹ The application of the precautionary principle to the protection of biodiversity and conservation planning is resulting in approaches that protect larger core areas to enable adaptation through ecological functioning, and the gathering of extensive data for monitoring and evaluation purposes.²⁰ Monitoring and evaluation of management strategies is fundamental to adaptive management where a variety of land uses are occurring on a property. If ecosystem function goals are not being met, managers can adapt activities on the landscape, including changing the amount of core protected area under management on the existing parcel, to achieve biodiversity and ecological goals.

In short, this nested approach to ecosystem-based conservation planning accounts for biodiversity before evaluating what, if any, other uses of the land are appropriate. Human uses overlay functioning ecosystems. The site-specific

¹⁹ See the Wingspread Consensus Statement on the Precautionary Principle (1998) <http://www.sehn.org/wing.html> and Principle 15 of the Rio Declaration on Environment and Development from the 1992 Earth Summit <http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=78&ArticleID=1163>.

²⁰ See, for example, Fernandes, L. et al. (2005). "Establishing Representative No-Take Areas in the Great Barrier Reef: Large Scale Implementation of Theory on Marine Protected Areas" 19:6 Conservation Biology 1733.

conservation planning is also nested within larger regional or island ecological systems and ideally provides a key connectivity function across the region. Finally, as is discussed in more detail below, the process by which conservation planning occurs is inclusive of the individuals and organizations that represent the range of values and interests in the community, and the management approaches flowing from the plan are structured to adapt over time. This adaptive management approach is not only for the ecosystem, but also for the socio-ecological system and enterprises on the site.

The conservation planning principles upon which the management plan for DL57 is based are (*Galiano Learning Centre Management Plan* (2013) at page 4):

1. Focus on what to protect, then on what to use.
2. Recognize the hierarchical relationship between ecosystems, cultures, and economies - that economies are part of human cultures, which are part of ecosystems. Therefore, maintaining the integrity of ecosystems provides the basis for sustainable cultures, including their economies.
3. Apply the precautionary principle to all plans and activities.
4. Protect, maintain, and, where necessary, restore ecological connectivity, and the full range of composition, structure, and function of enduring features, natural plant communities, and animal habitats and ranges.
5. Facilitate the protection and/or restoration of Indigenous land use.
6. Ensure that planning is inclusive of the range of values and interests.
7. Contribute to diverse, ecologically sustainable, local economy.
8. Practice adaptive management. .

1.2 The Process of Conservation Planning

The process of conservation planning ideally begins with identifying sensitive ecosystems and elements and continues in perpetuity through monitoring, evaluation and adaptive management.²¹ Creating ecosystem inventories using mapping has become a key part of identifying plant and animal habitats and ecosystem features. Ideally, that mapping is first used on a regional scale to identify connectivity or biodiversity corridors,²² as well as establish priorities for land acquisition based on ecological sensitivity. From that regional scale, site specific acquisitions can then be identified and collaborative planning on private land can assist in achieving region-wide connectivity goals.²³ At all scales it is important to

²¹ See section 2.6 of the *Green Bylaws Toolkit*, pages 22-24, for a discussion on the importance of mapping for identifying sensitive ecological areas. www.greenbylaws.ca

²² For an example of this approach in an urbanized landscape see Gordon, A. et al. (2009) "Integrating Conservation Planning and Land Use Planning in Urban Landscapes" 91 *Landscape and Urban Planning* 183.

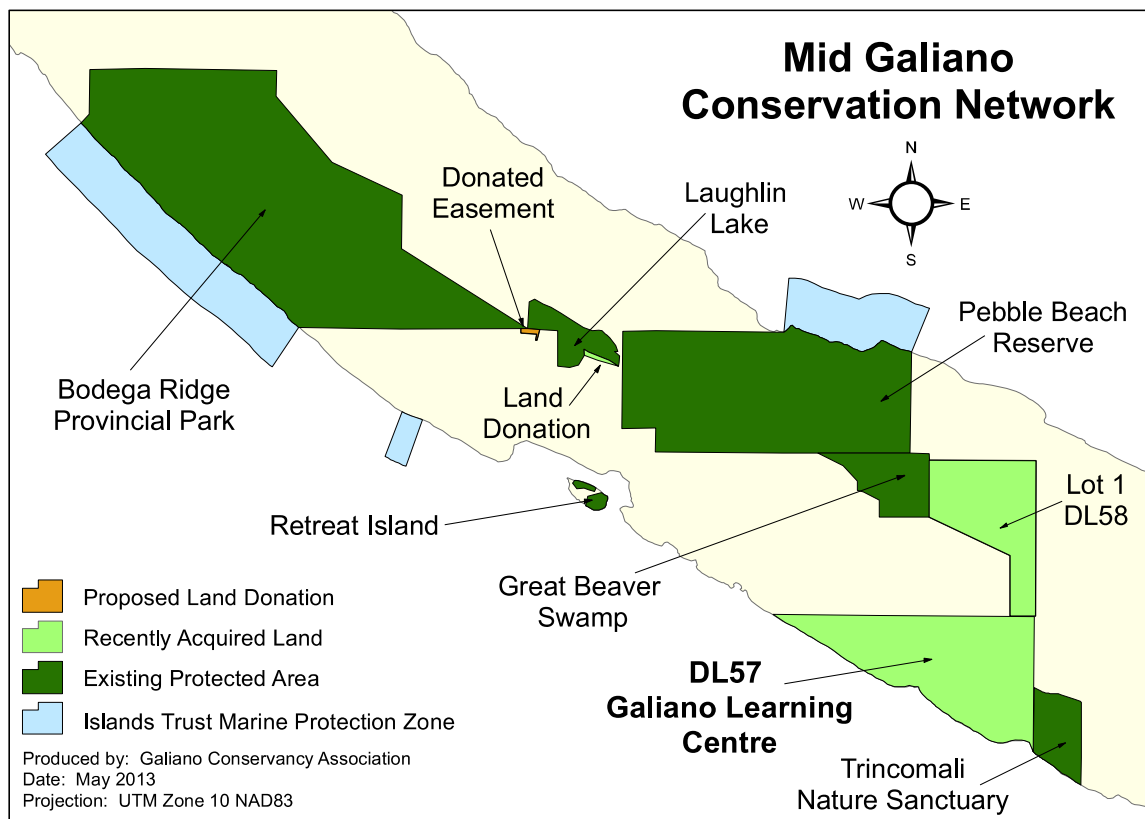
²³ Jansujwicz, J.S. & A.J.K. Calhoun (2010). 'Protecting Natural Resources on Private Lands: The Role of Collaboration in Land-use Planning' in S.C. Trombulak & R.F. Baldwin, eds, *Landscape-scale Conservation Planning* (New York: Springer) 205.

monitor the health of ecological communities, and to adapt both conservation plans at a regional scale and management plans at a site-specific scale.

An example of this approach is in the Capital Regional District (CRD) where the 1997 Regional Green/Blue Spaces Strategy,²⁴ created by CRD Parks and a host of non-governmental organizations, identified priorities for land acquisition throughout the region based on a desire to protect important ecosystems and to complete greenbelts or biodiversity corridors. Many of the land acquisitions by local governments and land trusts since the adoption of the Strategy have been of unprotected lands in the Green/Blue Space Core Areas and Greenways.

Map 2 shows the larger ecological connectivity network within which DL57 is located. Map 3 represents the ecological mapping of DL57 itself.

Mapping is crucial for identifying sensitive ecosystems, biodiversity and connectivity corridors, and establishing priorities for land acquisition



Map 2: Galiano Island Mid-Island Connectivity

²⁴ Capital Regional District (1997). Regional Green/Blue Spaces Strategy (Victoria: Capital Regional District) http://www.crd.bc.ca/parks/documents/greenblue_spaces_strategy.pdf.

The Galiano Conservancy started using geographic information system (GIS) in 1997 to map Galiano Island. In 2002 the Conservancy analyzed their GIS data and established landscape classifications that identified priority ecosystems and properties. District Lot 57 emerged out of that mapping process as being of high ecological value, a status that Conservancy staff had suspected but not yet verified. At the same time, the owner of DL57 approached the Galiano Conservancy to explore the possibility of the Conservancy purchasing the property. This willingness to sell started a series of negotiations over ten years that culminated in a land acquisition with the assistance of the NCC. However, the support of the NCC was subject to more detailed mapping for the area to establish the ecological importance of DL57. Although the site-specific acquisition process began at the turn of the century, the Islands Trust Fund Regional Conservation Plan 2011-2015 supports the acquisition and conservation planning of DL57. Goals and objectives in the Plan address implementing a core conservation area strategic plan with the aim of securing, including through assisting other organizations, high priority lands. The Plan also recognizes the importance of protecting biodiversity on lands outside of core conservation areas and the Islands Trust Fund has committed to investigate the resources required to more actively protect conservation values on working landscapes.²⁵ Finally, the Islands Trust Fund ranks DL57 as a high priority for conservation through its conservation analysis.²⁶

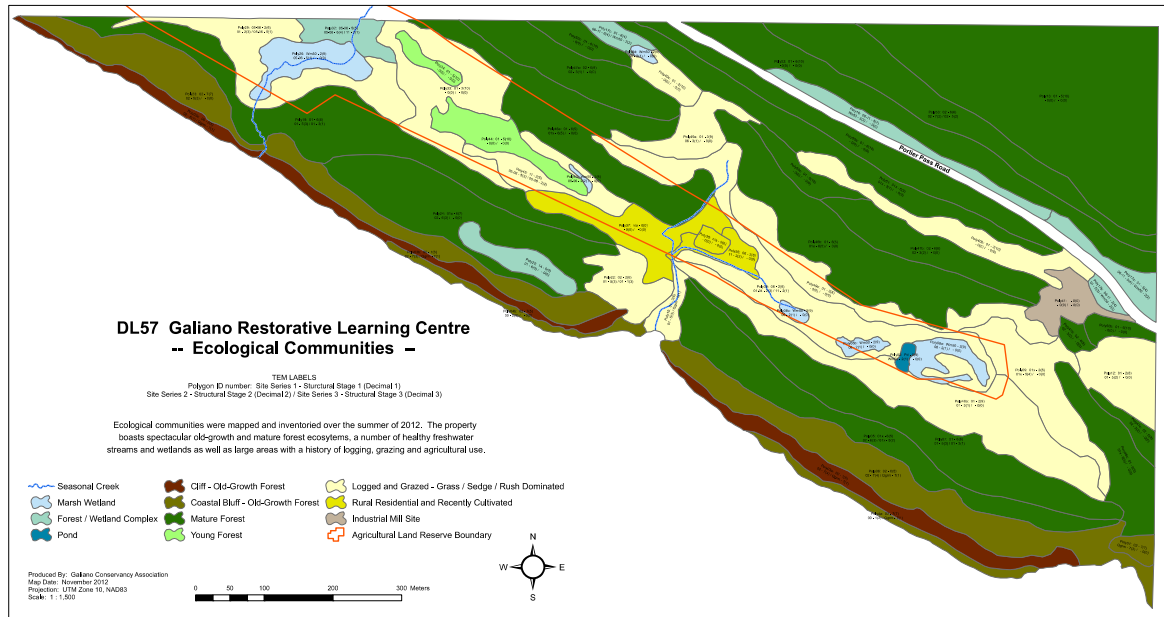
At the site-specific scale, the initial conservation planning document for DL57 is the Galiano Learning Centre Management Plan, which establishes the long-term management goals and objectives for DL57.²⁷ It also includes guidelines and zoning for how the property shall be stewarded and used. In short, it provides an overall framework from within which more detailed conservation, restoration, agricultural and other planning can occur. Additional detailed planning priorities include ecological restoration, invasive species control, site access, safety and use for existing buildings, and conceptual plans for development of facilities and infrastructure.²⁸

²⁵ Goal 1, Objectives 3 and 5 and Goal 2, Objective 9. Islands Trust Fund (2011). *Regional Conservation Plan 2011-2015* (Victoria: Islands Trust Fund) at pages 46-47
http://www.islandstrustfund.bc.ca/media/9359/regional_conservation_plan.pdf.

²⁶ Personal communication, Kate Emmings, Ecosystem Protection Specialist, Islands Trust Fund.

²⁷ Galiano Conservancy (2013). Galiano Learning Centre Management Plan (Galiano Island: Galiano Conservancy).

²⁸ *Ibid* at page 42.



Map 3: Ecological Mapping of DL57

The Islands Trust Fund adopted a Regional Conservation Plan in 2010 in collaboration with non-governmental organizations, land trusts and conservancies operating in the Islands Trust area, as well as experts from the provincial and federal governments. The purpose of the Plan is to assist the Islands Trust Fund to focus its resources on land with the highest biodiversity values, and to assist Islands Trust decision makers when making decisions about planning and land use. Based on scientific information and local knowledge, priorities for conservation can be achieved through land acquisition and working with landowners.

The long-term goals for the Plan are:

1. Secure core conservation areas that effectively conserve biodiversity priorities within the Islands Trust Area and within individual local trust areas or island municipalities
2. Investigate the protection of biodiversity priorities on lands outside of core conservation areas, including working landscapes
3. Work with partner organizations to conserve marine ecosystems and habitats
4. Work with the Islands Trust Council, local trust committees and island municipalities to implement and accentuate Regional Conservation Plan goals and objectives within official community plans and land use bylaws
5. Promote community participation in conservation within the Islands Trust Area through effective stewardship and management of private lands, information sharing and support of conservation education
6. Support and enhance the work of conservation partners working in the Islands Trust Area
7. Monitor and manage existing Islands Trust Fund conservation areas to maintain

and enhance existing biodiversity and cultural features, with the understanding that ecosystems are continuously in a state of change²⁹

The City of Vernon's Environmental Management Areas Strategy, as implemented through development permit areas for protection of the natural environment, classifies land outside the urban core as having low, medium and high conservation values based on terrestrial ecosystem mapping and the sensitive ecosystems inventory.³⁰

The timing of any land acquisition is a key consideration. Priority parcels may not be available for purchase for many years. It is important to keep the land acquisition conversation going with existing owners and to build relationships with them. Land acquisition and conservation are long term endeavours.

1.3 Monitoring and Evaluation

A key part of adaptive management that reflects changes to ecosystems, whether induced by increasing biodiversity or a threat like climate change, is the need to monitor changes within ecosystems. Likewise, the need for monitoring and evaluation is also important for uses of the land, such as agricultural and educational, to ensure that they continue to meet the ecosystem-based goals for the property as well as social enterprise and other community sustainability objectives. The data from that monitoring can assist local governments and organizations, at regional and site-specific scales, to evaluate whether conservation planning goals are being met. Typically conservation or management plans identify what metrics or evaluation criteria will be used to generate data that will be used in evaluation and adaptive management.

Monitoring and evaluation of DL57 and the implementation of the Management Plan will be overseen by the committee of the Galiano Conservancy Association board that is responsible for the site. In addition to annual progress reviews, the committee is responsible for a review and update of the Management Plan after five years.³¹ Short-term monitoring priorities set out in the Management Plan include assessments for hydrology, learning programs, risk, and public use, as well as the development of more detailed plans that will identify metrics for evaluation, for example for ecological restoration.

²⁹ Islands Trust Fund (2011). *Regional Conservation Plan 2011-2015* (Victoria: Islands Trust Fund) at page 4 http://www.islandstrustfund.bc.ca/media/9359/regional_conservation_plan.pdf.

³⁰ City of Vernon (2008). *Environmental Management Area Strategy* (Vernon: City of Vernon). http://www.vernon.ca/services/pde/documents/ema_strategy_final.pdf

³¹ Galiano Conservancy (2013). *Galiano Learning Centre Management Plan* (Galiano Island: Galiano Conservancy) at page 42.

1.4 Plan Adaptation

The final step in the cycle of conservation planning is the continuous adaptation of plans as ecosystems and sustainable economies change over time to reflect changing ecological and economic conditions. This is particularly true in the face of rapid climate change. The process for plan adaptation over specific time periods must be built into the conservation plan. For example, the business plan for the land may have a three to five year shelf life, with evaluation and plan adaptation for all the systems occurring on the land every five to seven years. A regional conservation plan may lend itself to more long-term planning that endures for ten years before a comprehensive review occurs.

The intent is for the Islands Trust Fund to evaluate and revise the Regional Conservation Plan every five years.

As the first conservation planning document for DL57, the intent is to review and update the Galiano Learning Centre Management Plan after five years.

This baseline of conservation planning for specific sites in a regional ecosystem context sets the foundation for further planning activities that layer the human or socio-ecological activities onto the site. Called mixed-use or integrated land use, the next stage is to create options for a diversity of land uses on the parcel.

2. Planning for Integrated Land Uses

The evolution of ecosystem-based conservation planning from a primary focus on ecological health to a more broad view of socio-ecological systems parallels the development of more urban or human-based land use planning. The preoccupation with separating potentially incompatible uses, such as industrial and residential, lead to urban sprawl where hectares of a single use – housing, industrial, commercial – paved over landscapes and necessitated residents to travel farther to take care of daily needs.³² This single use approach gave way in the 1990's to a reintegration of a complex fabric of uses into most neighbourhoods in support of community livability and sustainability so that residents could live, work and play within walking distance of home. Integrating a variety of land uses into each neighbourhood or on a larger rural parcel of land can address ecological, economic and social vitality.³³

³² Rome, A. (2001). *The Bulldozer in the Countryside: Suburban Sprawl and the Rise of American Environmentalism* (Cambridge: Cambridge University Press).

³³ Arendt, R. (1994). *Rural By Design: Maintaining Small Town Character* (Washington, D.C.: American Planning Association); Grant, J. (2002). "Mixed Use in Theory and Practice: Canadian Experience with Implementing a Planning Principle" 68:1 *Journal of the American Planning Association* 71.

A key part of integrating land uses on a parcel is the process of planning for mixed-use. Like for conservation planning, the process of determining the appropriate mix of uses and activities on a site is a collaborative effort that should take into account community interests and stakeholder values. At its heart, the ecological health of the site and region is the non-negotiable foundation or pass/fail criterion within which the social and economic uses are nested.

2.1 Mixed Use Approach

This restoration of complexity and layering of sustainable human uses onto ecological systems can apply in both urban and rural settings.³⁴ In a rural setting the social and economic goals of integrated land use are often based on the kinds of activities that can be sustained from the site itself. For example, agricultural production often supports daily activities as well as caretakers and others who live on the site. Ecosystem-based forestry of trees on a site can support value-added enterprises of wood milling and product manufacturing. Educational activities can contribute to the knowledge and monitoring of the site, as well as generate revenue for the overall activities.

Within an ecosystem-based framework and business planning, what mix of uses is appropriate for a site depends on site ecology, restoration goals, climate, proximity to markets and the regional economy. Agriculture may only be appropriate in areas where classes 1-5 soils are present. However, if these soils are only found in the most ecologically sensitive areas of the site then agriculture may be forgone in favour of biodiversity.

The evaluation of use options within the framework of ecosystem-based management takes place through collaborative site planning processes that focus on integrating local and scientific knowledge about the site with potential uses.

2.2 Collaborative Site and Management Planning

Conservation planning and management that depends on the wider community to succeed requires a collaborative design approach.³⁵ By involving the broader community more information about the site and its role in the region is brought to the table. Community members and local governments can also gain a better understanding of the motivation behind the planning process and potential changes on the site.

³⁴ See, for example, the *Green Bylaws Toolkit* that advocates for the same conservation planning approach in urban and rural areas as presented in this Resource Guide. www.greenbylaws.ca

³⁵ Spelke Jansujwicz, J. & Calhoun A.J.K. (2010) "Protecting Natural Resources on Private Lands: The Role of Collaboration in Land-Use Planning" in Stephen C Trombulak & Robert F Baldwin, eds, *Landscape-scale Conservation Planning* 205.

A collaborative site and management planning process typically involves the owner/managers creating a baseline of information – ecological, social and economic – from both scientific and expert data as well as from local knowledge obtained from community residents, past owners, and past users of the property. This data foundation is then used to generate ideas for integrated land uses and sustainable infrastructure. The initial “lay of the land” and idea generation occurs within the ownership/management organization. These preliminary ideas are then shared with the broader community through open houses and targeted consultations with all interested parties. At the same time, the ideas are discussed with the local government to keep them informed of the process and identify any problems up front. The ownership/management team then refines the ideas to form a draft management plan. Feedback on that draft plan is again sought from the broader community and ideally supported. More specific discussions can occur with the local government in anticipation of the owner organization making applications for land use and other regulatory approvals.

Finally, management planning can either envision specific land uses for a designated period of time or it can anticipate future uses and establish land use zones that will enable the enterprises to adapt within the healthy and restoring ecosystem over a long term time horizon. Management plans can find a balance between contemporary needs and the mandate to preserve ecosystem function with any potential need for expansion in the future such that the expansion is contemplated and already factored into ecosystem requirements.

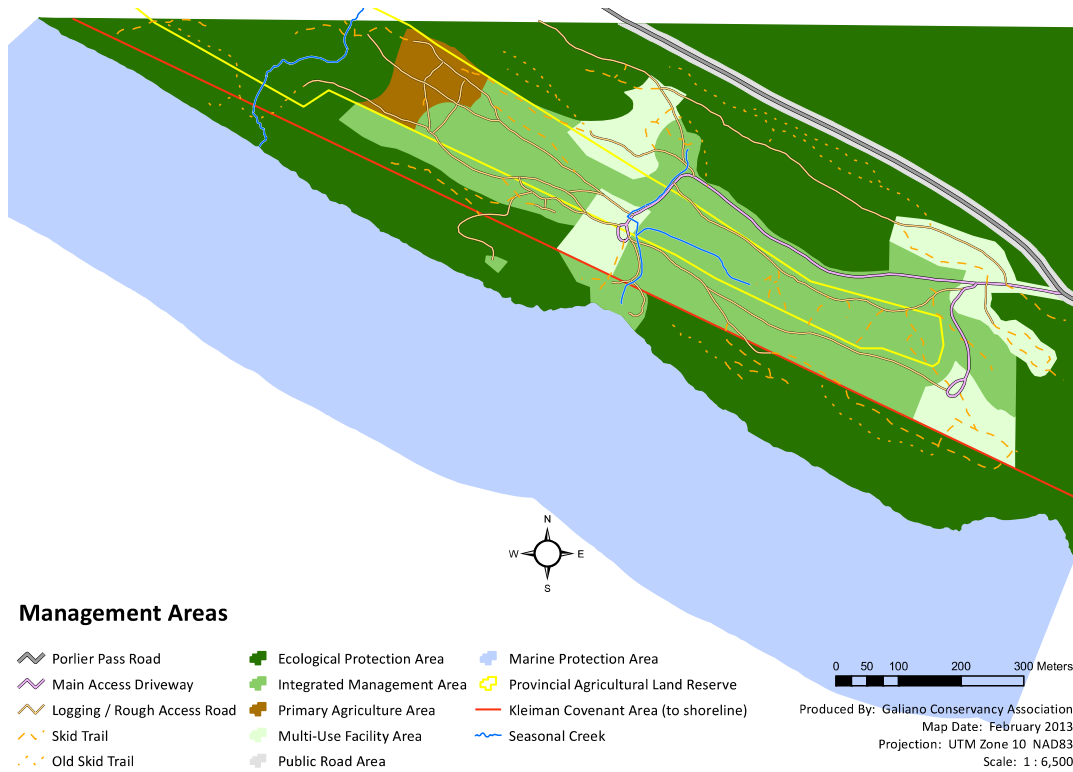
The Galiano Conservancy struck a planning committee to develop the Management Plan for the DL57 site. The committee included board and staff members of the Galiano Conservancy, faculty from the University of Victoria School of Environmental Studies, and members of the public. The planning committee chose a collaborative planning process that included two open houses for the community at large, as well as an extraordinary general meeting for the Galiano Conservancy membership. The Conservancy consulted throughout the process with the primary funder of the acquisition, the NCC, to ensure that the emerging Management Plan was consistent with the Galiano Conservancy’s proposal for funding from the NCC. The Islands Trust Fund as well as the adjacent landowners were also directly informed of the process and consulted throughout with respect to how the management of DL57 relates to the Islands Trust Fund Regional Conservation Plan goals and objectives. Islands Trust staff were also kept abreast of the content of the plan in anticipation of future regulatory applications and approvals on the land. Experts provided advice on the agricultural capability of the land, as well as ecosystem-based planning and sustainable forestry. Ecological data about the property, generated by professionals in consultation with local and provincial experts, informed the planning process. Finally, the planning process benefitted from consultation with organizations that have experience with the Galiano

Conservancy Association's nature-based education programs.

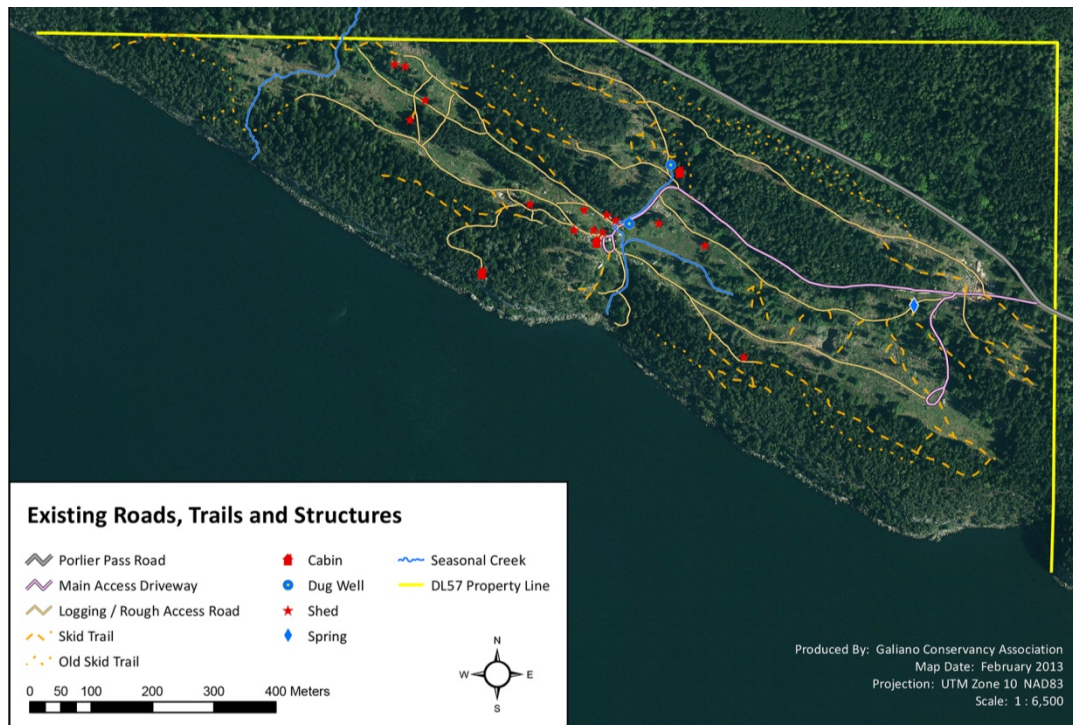
When contemplating purchasing DL57 the Galiano Conservancy staff and board had always envisioned the property extending the Conservancy's existing programs in a meaningful way. This property offered the possibility to integrate education and restoration work on one property and develop the capability for providing multi-day and long term education programs. Once the process of collaborative planning was started, it became apparent that there was the potential for broadening the focus to include sustainable living as well. The site offered a platform to explore sustainable landscapes, generate food and energy, and engage in water management. This expansion of focus pushed the Galiano Conservancy Association in the direction of involving a larger variety of people to better explore the identified sustainable living topics. These experts included Herb Hammond, ecosystem-based forester and Gary Runka, agrologist, as well as the University of Victoria Environmental Studies 441 field course in the spring of 2013, the students from which generated five restoration-based project designs for the property. Likewise, as the process unfolded it became clear that engaging with all parties who had an interest in the land – the neighbours, funders, local governments, and other organizations – would generate more workable ideas and result in better community support at the end of the process.

The collaborative planning process attracted good attendance of interested people. There was active discussion and most people who attended knew DL57 as a property. It became clear that this was an important property to many people on the Island who had purchased milled wood, particularly cedar, from the former owner. There were also many people who had lived on the property when their options for housing were limited, thus the property had played an important social role. Finally, the former owner is a well-respected member of the community and garners respect from a wide spectrum of the community. These connections to the property demonstrated the important role that the former owner and property had played in the Island community. In addition, it became clear that many people wanted to see DL57 continue to be treated well for both conservation and human activities. See Map 4, the integrated land use plan for DL57 that resulted from the collaborative planning process.

Finally, through the collaborative planning process the Outer Gulf Islands Economic Development Commission became engaged and interested in the vision put forward, that of local small scale employment with modest tourist/visitor activity, as an important model for Island communities that are near large urban centres.



Map 4: Management Area Zoning for DL57



Map 5: Existing Roads, Trails and Structures on DL57

OUR Ecovillage, a 26 acre rural community founded on sustainability principles near Shawnigan Lake in the Cowichan Valley on Vancouver Island, undertook a Sustainable Land Management Design process over the course of several years. With a visioning process for a rural site already complete that identified education, residential and ecological uses for a property, the site planning continued with extensive community consultation. In addition to public events and open houses at which Ecovillage members obtained feedback for the ecovillage concept, members also consulted with the local government and many provincial regulators. The Cowichan Community Land Trust had a key role in mapping and the ecological planning for the site.³⁶

Yarrow Ecovillage, a 25 acre farm community in downtown Yarrow within the City of Chilliwack in the Fraser Valley, coined the term “co-design” for their approach to collaborative integrated design. Co-design involves three steps that can be repeated until all parties, being Yarrow Ecovillage members, the municipality, and the community of Yarrow, were satisfied. The first is a brainstorm amongst Yarrow Ecovillage members to uncover what members are interested in undertaking on the land. The second is to discuss those ideas with municipal staff and council. The third step is to host public meetings with the wider community of Yarrow to receive their input on those ideas. After four rounds of this co-design process, Yarrow Ecovillage submitted their application for rezoning, which Chilliwack City Council unanimously approved.³⁷

The integrated management planning process can take a considerable amount of time and resources. If it goes well, the entire community can be satisfied with the vision for a property and anticipating the activities on the site. However, management planning is only one of the first steps between acquiring the property and using it for conservation and other purposes. After management planning comes a range of mandatory regulatory approvals for the activities on site, the primary of those being compliance with local government zoning.

3. Zoning and Mandatory Regulatory Approvals

Zoning is the exercise of identifying different uses and amount or intensity of those uses (called density) on a piece of land or across a landscape. As a legal term, zoning refers to a local government’s authority to designate different uses across their jurisdiction, for example, establishing residential, commercial, industrial, agricultural and rural areas. As discussed in Part 2.0, the practice of zoning became to pave over entire landscapes while strictly separating land uses with the intent to

³⁶ OUR Ecovillage, Overview of sustainable Land Use Design
<http://ourecovillage.org/about/projects-research/our-rezoning-work/>.

³⁷ Hale, M. (2008). “How Yarrow Ecovillage Got ‘Ecovillage Zoning’” Ecovillage Newsletter
http://www.ecovillagenews.org/wiki/index.php/How_Yarrow_Ecovillage_Got_“Ecovillage_Zoning”.

avoid the co-location of incompatible land uses such as a lead smelter adjacent to an elementary school. However, current planning practice is to conserve ecosystem function and integrate a range of mixed uses into any neighbourhood, or on some properties, to increase local livability and decrease dependence on automobile travel.³⁸

Zoning authority gives local governments the ability to regulate:

- the use of land, buildings and other structures;
- the density of the use of land, buildings and other structures;
- the siting, size and dimension of buildings, other structures, and permitted uses;
- the location of uses on the land and within buildings and other structures; and
- the shape, dimensions and areas, including the establishment of minimum and maximum sizes, of all parcels of land that may be created by subdivision.³⁹

This regulatory scope gives local governments broad authority to shape what type of activities and development occur on sites, and where those activities occur in neighbourhoods and sites. As a political decision implemented by bylaw, elected local government officials have significant discretion to approve or reject applications for zoning when considering the public interest. They can take into account a wide variety of factors when making their decision. These may include the official community plan and other bylaws, the surrounding uses, the intended long-term character of the parcel or neighbourhood, and whether it is appropriate to presently change the use or density of a particular land parcel.

It is also important to note that zoning is still typically homogenous. Zoning bylaws set out residential, commercial, industrial, agricultural, institutional and rural zones. While a diversity of uses may be allowed in the various zones, there is usually a primary use that dominates the intended use of the parcel. The concept of mixed-use zoning is understood in planning practice but more frequently used in urban settings, for example to allow retail to occur on the bottom floor of a residential or office highrise, or to allow a small commercial centre in a new residential neighbourhood.

In rural settings an integrated conservation plan for a site where human uses are clustered away from areas identified for conservation and restoration may be viewed by planning staff and elected officials as contrary to rural planning principles. While rural land use supports a diversity of uses on a site, traditionally

³⁸ See, for example, Morris, M. (2009). *Smart Codes: Model Land Development Regulations* (Washington, D.C.: American Planning Association)

³⁹ This description of zoning authority is what is found in B.C. and reflects the general approach to zoning in North America. *Local Government Act*, R.S.B.C. 1996, c.323 s.903 (1) (c) and (d).

that has meant only one residence or family enterprise. It is a relatively new notion to maintain a larger parcel on which a variety of uses are allowed, involving multiple enterprises or activities, with conservation as the foundation.

Finally, local government staff and elected officials will also want to ensure that an integrated land use approach with mixed uses does not result, overall, in a significant increase in density on the parcel in a rural setting. Part of this concern stems from experiences where landowners have obtained innovative zoning for a particular vision that meets community goals, those landowners then sell the property and the zoning in place is used for an entirely different enterprise or activities that are not necessarily in keeping with what the local government envisioned for the site or neighbourhood. Once zoning is in place, absent the local government initiating a rezoning to change the potential uses on the site, it allows a range of uses that could be undesirable.

Meeting zoning requirements or obtaining a zoning amendment will be easier if the management plan for the site generally fits into the existing land use vision for the area such that site activities are consistent with the official community plan. If not, and a local government agrees that the management plan is in the public interest, the application for rezoning can also include an application to amend the official community plan. To ensure local government staff and elected officials are aware of the vision for the site and can identify possible road blocks early on, it is important to consult with them throughout the collaborative management planning process.

The existing zoning on DL57 is residential and agriculture, and allows for 15 to 18 residential units and cottages. The former owner had obtained preliminary layout approval for subdividing the land into smaller residential lots along the waterfront. There is no land use designation or zone in the Galiano Land Use Bylaw that would accommodate the mixed-use vision for the Learning Centre on DL57, therefore making an application to change the zoning is necessary. Even with a mixed use approach that includes some commercial and institutional activities, the kinds and density of use envisioned in the Management Plan is considered a decrease in density or downzoning, which reflects the conservation attributes of the integrated management plan and the intent to keep Galiano Island rural, as set out in the official community plan.

This approach to conservation and development in DL57 reflects the vision set out in the preamble to the Galiano Island official community plan, which reads in part:

The rural character of the Galiano Island Trust Area must be preserved. The water fronts, beaches and waters surrounding them must be preserved and kept free of pollution for the enjoyment of users and the preservation of marine life. Groundwater supplies must be protected from contamination by effluent of all types. Ground cover and trees must be preserved to the extent necessary to maintain the natural beauty of the island, the ability of the soil to retain moisture and to prevent erosion of soil and

soft rocks. Particular care must be taken to preserve sufficient land and water in their natural state to enable wildlife, plant life and marine life of the island to continue to exist and flourish.

As the present generation inherited these islands in a relatively preserved state so this Plan attempts to perpetuate this state and preserve the unique environment for future generations.

Even seemingly small changes can damage or deplete resources, compromise self-sufficiency and distort long term planning. It is a tribute to the continuing vigour, passion and foresight of our community that much of the natural character and resources of Galiano has been maintained.

All our resolve, however, might not have prevailed without the support and protection of the Islands Trust Act of 1974 with its Object:

To preserve and protect the trust area and its unique amenities and environment for the benefit of the residents of the trust area and of the Province generally, in cooperation with municipalities, regional districts, improvement districts, other persons and organizations and the government of the province.

As an interim step between management planning and rezoning, the Galiano Conservancy obtained a three year temporary use permit from the local government that allows it to undertake educational and other activities on the site under the current zoning. The temporary use permit allows educational programming, camping and modest residential use for a caretaker. As a stepping stone to rezoning, the temporary use permit gives the Conservancy time to commence activities on the land while moving forward with the potentially lengthy process of rezoning (see part 3.2 below).

3.1 Mixed-Use Conservation Zoning

While local governments cannot zone land solely for conservation purposes such that there is no private use of the land⁴⁰ several local governments are beginning to use stand alone conservation zoning as a component of rezoning for larger land development projects or for mixed-use integrated zoning. Typically with permission

⁴⁰ While section 914(1) of the *Local Government Act* dictates that local governments do not have to pay compensation for loss of property value from changes in bylaws or issuance of permits under that part of the *Act*, under section 914(2) that principle does not apply where the bylaw restricts the use of land to a public use. This means that a local government cannot zone a property solely for a public use i.e. ecological conservation. For examples of conservation zoning see the Galiano Island Land Use Bylaw Nature Protection Zone 11.1
<http://www.islandstrust.bc.ca/lc/gl/pdf/glbylbaselu0127.pdf>.

of the landowner, conservation zoning can be attached to land dedicated as parkland, common property in a strata development, or to a portion of land intended to be kept in a natural state. Conservation zoning in B.C. allows for passive recreation, ecological reserves, research and educational activities, groundwater retention and recharge and ecological recreation. Buildings are usually prohibited on site.

More commonly, however, new zoning refers to conservation or natural areas protection and spells out the circumstances under which building in the form of clustered development may occur on a site. In addition, development permits for protection of the natural environment may also overlay zoning as additional regulation and can reflect the conservation aspect of the management plan as activities move forward on the site. See part 4.2 for a discussion of environmental development permits.

The examples of mixed-use conservation zoning reviewed for this Resource Guide typically allow:

- Agriculture and secondary processing and sales of agricultural products;⁴¹
- Residential in all low-density forms (single detached, duplex, triplex and fourplex) that are limited to approximately the maximum number of units that would have been allowed on lots had the parcel been subdivided. For example, if a 20 acre lot could, under zoning in the rural area, be subdivided into 10 lots with one home on each lot, the mixed-use conservation zoning would allow 10 or more units to be clustered;
- Home based business that is secondary to the residential use. Home based businesses may not be allowed in each home but capped at a specific number on the parcel (for example, there may be three residences but only one allowed home based business);
- Educational activities that are limited by the number of visitors on site at any one time. Accessory or secondary uses to those educational uses may include accommodation (sleeping, bathroom, and kitchen facilities). Other accessory uses to the educational activity could be residential for a caretaker and housing for staff;
- Public events with limits on the number of visitors and the hours within which the public events may occur; and
- Other value-added enterprises that relate to the secondary processing of materials taken from the property.

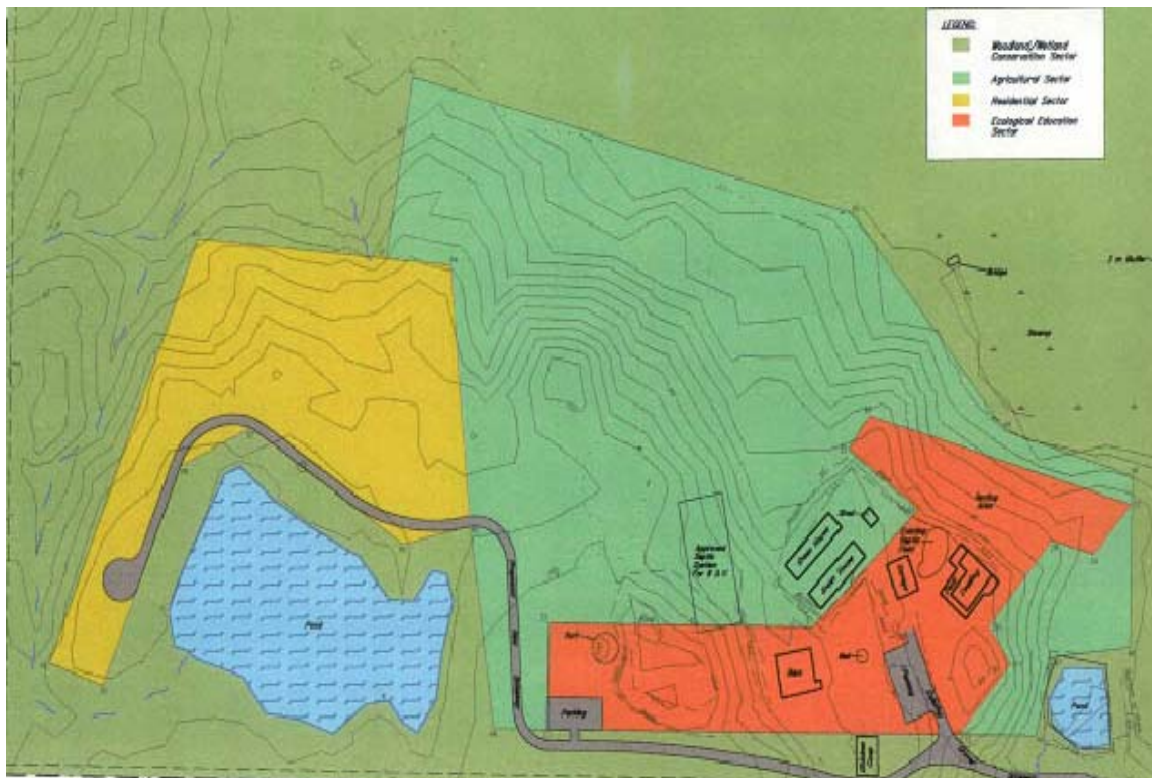
In 2003 the Cowichan Valley Regional District granted OUR Ecovillage the first zoning in Canada specifically tailored to mixed use ecovillage needs that

⁴¹ This is permitted in B.C., in any case, by the provincial *Agricultural Land Commission Act*, S.B.C. 2002, c.36 and the *Agricultural Land Reserve Use, Subdivision and Procedure Regulation* B.C. Reg. 171/2002 for land in the agricultural land reserve or zoned agricultural irrespective of local government zoning regulation. This legislation and regulations also govern accommodation for farm workers.

accommodates residential, educational, agricultural, small business and service uses. Called a comprehensive zone because it allows a range of uses on each parcel, the R-4 Zone – Rural Community Residential in the Cowichan Valley Regional District Zoning Bylaw Electoral Area B – Shawnigan Lake allows the following uses:⁴²

- Agriculture and horticulture;
- Sales of products grown or reared on the property, including value-added agricultural products;
- Educational activities with a maximum of 30 non-residents and limited to the hours of 7:00 a.m. to 9:00 p.m.;
- Single family dwelling, not to exceed an overall density of one dwelling per hectare and with an aggregate total number of bedrooms limited to 25;
- Accessory residential including a kitchen facility;
- Six camping spaces, accessory to the educational use;
- One home occupation, One bed and breakfast.

Map 6 shows the land use zones on the parcel, which include woodlands/wetlands conservation zone around the perimeter (dark green), agriculture (light green), ecological education and infrastructure (red), and residential (yellow).



Map 6: OUR Ecovillage Zoning Use Areas

⁴² Section 8.6, page 31. <http://www.cvrld.bc.ca/DocumentView.aspx?DID=654>

The Yarrow Ecovillage zoning from the City of Chilliwack is billed as the first mixed use “Ecovillage Zone” in Canada. Obtained in 2004 and 2006, the zoning allows for a full range of agricultural, residential, and commercial/retail on the site.

Commercial/residential is allowed on a small part of the property that borders the main road through Yarrow. Allowing the existing deli on the site, this part of the zoning allows for a mix of retail businesses on ground floors with residential above. On five acres there is an ecovillage zone that allows for clustered residential uses, which is an increase from 5 to 37 residences. Finally, the remainder of the site is within the Agricultural Land Reserve to be used for farming.⁴³ As spelled out in the zoning bylaw, permitted uses are:

- agriculture, including sales;
- one, two (duplex) and multi-family (townhouse) residential;
- rural ancillary of one per dwelling unit;
- cottage industry of one per dwelling unit;
- convenience commercial;
- boarding;
- outdoor recreation – guest ranch for the travelling public and farm workers on a seasonal basis and maximum 20 bed spaces;
- public or private assembly of a maximum of 30 non-residents; and
- off street parking.

3.2 Zoning Application Process

If the appropriate zoning that would allow the ecosystem-based integrated land uses to occur on the property is not in place, the landowner will need to apply for a change in zoning from the appropriate local government. This process takes considerable time and effort in most local government jurisdictions as it is a public process with the broader public given a statutory right to comment on the intent and effect of the rezoning at a public hearing. Anyone who believes they have an interest in the rezoning may speak. So in addition to filling out paperwork to initiate the rezoning, the applicant must negotiate with staff of the local government and present the rezoning application to elected council members or trustees if the application moves forward. The applicant may be required to hold an open house for members of the public to ask questions or consult with specific organizations.

At the end of the day, zoning is a political process where council or trustees, acting in good faith and with the public interest in mind, have almost complete discretion to accept or reject an application for rezoning. Hence, it is important to ensure that the rezoning meets the goals of regional and local plans and bylaws, as well as has the support of individuals and organizations that represent a diversity of interests in the community.

⁴³ See the City of Chilliwack Zoning Bylaw section 8.11 (Ecovillage) Zone.
<http://www.chilliwack.ca/main/attachments/Files/377/Section%2008%20-%20Rural%20Zones1.pdf>

In the Islands Trust area, the steps of applying for rezoning involve the following:

Step 1 – Pre application: consult with Islands Trust staff and consult with the public

Step 2 – Application

Step 3 – Application Review

Step 4 - Preliminary evaluation and staff report

Step 5 – First consideration by Local Trust Committee (and if not rejected)

Step 6 – Subsequent reports and final staff report

Step 7 – Public consultation and referral to agencies and advisory bodies

Step 8 – Additional information

Step 9 – Reconsideration by Local Trust Committee

Step 10 – First Reading of the bylaw and beyond (bylaw referral, public hearing, public notification, second and third reading of the bylaw, submission to the Islands Trust Council Executive Committee, submission to the Minister of Community Development, reconsideration and final adoption).⁴⁴

3.3 Other Regulatory Approvals

Depending on the uses that will occur on the site, other regulatory approvals may be necessary beyond ensuring that the appropriate zoning or use permits are in place. Only three are discussed here – drinking water authorizations, building permits and liquid waste disposal – but there are many more that may be required. Local governments can point landowners in the right direction about land use and other regulations.

It is often public health standards that create the largest barriers to pursuing sustainable infrastructure where novel approaches, such as liquid waste that is treated with UV rays, an aquatic system or greywater use indoors, can be viewed as contrary to public health, particularly where non-residents will be using the facilities.

Drinking Water Authorizations

The provincial government establishes standards for drinking water and delegates oversight of those standards and drinking water systems to the provincial health authorities.⁴⁵ While there are many nuances to these regulations, it is important to note that all water supply systems that service more than one family will be subject

⁴⁴ For more information see the Islands Trust rezoning application guide at <http://www.islandstrust.bc.ca/lup/pdf/rzapplicationguide.pdf>.

⁴⁵ See the *Drinking Water Protection Act*, S.B.C. 2001, c.9 and the Drinking Water Protection Regulation B.C. Reg. 200/2003.

to additional regulation as “community water systems”. These requirements apply to all potable water sources irrespective of existing water supply arrangements on a site such as shared wells. Many local governments will also require that a landowner prove there is water available before issuing a building permit.⁴⁶

Policies 13.22 to 13.27 of the Galiano Island Land Use Bylaw establish standards for proof of potable water upon subdivision.

Building Permits

Most local governments in Canada offer the service of building regulation and require permits before structures that are bigger than a garden shed may be constructed. Provincial governments enact Building Codes that establish standards for the construction, alteration, repair or demolition of buildings, and local governments uphold those standards.⁴⁷ While local governments are becoming more receptive, Building Codes do not necessarily lend themselves to techniques of sustainable building.

Liquid Waste Disposal/Sewage

The owner of every parcel where a structure is constructed must ensure that all domestic sewage is discharged into a public sewer, holding tank, or sewerage system, and does not cause a health hazard.⁴⁸ The size and complexity of the required system will depend on the uses and intensity of those uses on the property.

In addition to zoning and other regulatory considerations, there are a variety of local government regulations and other strategies that can be employed to help implement land conservation, as discussed in Part 4.

4. Other Tools to Assist with Conservation Management Initiatives

A range of other local government regulations, land tenure and financing tools assist in making collaborative conservation acquisitions possible. The local government bylaws and regulations set out below can be put in place before conservation initiatives are underway to demonstrate the community support for such initiatives and direct development to more ecological sound approaches.

⁴⁶ *Local Government Act*, R.S.B.C. 1996, c.323 s.938 (5) for subdivision and s.938 (7) for building permits.

⁴⁷ In B.C. it is the British Columbia Building Code Regulation, B.C. Reg. 216/2006.

⁴⁸ Sewerage System Regulation, B.C. Reg. 326/2004 s.3.

4.1 Official Community Plan

Official community plans (OCP) establish the vision and direction for development and conservation in a community. OCPs may contain policies for the preservation, protection, restoration and enhancement of the natural environment, its ecosystems and biological diversity.⁴⁹ They articulate the community's objectives and policies for conservation, land use, and community. OCPs also establish guidelines for development permit areas (see below).

Although not directly enforceable, OCP policies can assist decision-makers, including planning staff and elected officials, decide whether a proposed activity or development is consistent with the community's goals and desired pattern of land use. They also provide information that can guide landowners toward the most appropriate form of development in particular areas. Finally, OCPs help elected officials to evaluate applications for zoning and development and make decisions.

4.2 Development Permit Areas for Protection of the Natural Environment and Farming

Local governments may establish development permit areas (DPAs) over an area based on ecology or form of development to further regulate where activities occur on a site and the quality of those activities.⁵⁰ When DPAs are in place, guidelines in the official community plan establish further direction to landowners as to how development may occur on their property. Typically these guidelines support and promote site-specific approaches to sustainability, including sustainable infrastructure. While they represent another layer of land use regulation, when evaluated in the context of regional conservation planning they can assist in meeting regional goals on a site-specific scale.

For land in a DPA, it must not be subdivided, land altered, or construction occur before the landowner obtains a development permit.⁵¹

Specifically for collaborative conservation initiatives, DPAs for the protection of the natural environment, its ecosystems and biological diversity, and protection of farming are important. Permits relating to land in environmental DPAs may:

- specify that areas of land remain free from development except if following the conditions set out in the permit;
- require specific natural features or areas be preserved, protected, restored or enhanced as per the permit;
- require the dedication of natural water courses;
- require works to be constructed to protect, restore or enhance water course or other natural features; and

⁴⁹ *Local Government Act*, R.S.B.C. 1996, c.323 s.878.

⁵⁰ *Local Government Act*, R.S.B.C. 1996, c.323 s.919.1 (1).

⁵¹ *Local Government Act*, R.S.B.C. 1996, c.323 s.920 (1).

- require protection measures, including vegetation, to preserve, protect or restore fish habitat or riparian areas, control drainage or control erosion.⁵²

In addition, for land within DPAs for the protection of farming, permits may include requirements for screening, landscaping, fencing and siting of buildings and other structures to provide for the buffering or separation of development from farming on adjoining or reasonably adjacent land.⁵³

4.3 Development Permit Areas for Energy and Water Conservation and the Reduction of Greenhouse Gas Emissions

Local governments may also create DPAs for the establishment of objectives to promote energy conservation, water conservation and the reduction of greenhouse gas emission.⁵⁴ Development permits for activities on properties in these areas may, in promotion of energy and water conservation and the reduction of greenhouse gases address:

- landscaping;
- restrictions on the type and placement of trees and other vegetation in proximity to buildings;
- the siting of buildings and other structures;
- form and exterior design of buildings and other structures; and
- machinery, equipment and systems external to buildings and other structures.⁵⁵

4.4 Development Cost Charges

A local government may impose development cost charges (DCC) on landowners who obtain a subdivision approval or building permit.⁵⁶ Their purpose is to pay for the additional costs of providing sewage, water, drainage, and roads, as well as providing and improving parkland, for the new development.

Local governments have discretion to impose different DCCs on different types of development or activities. Development cost charges can be tailored both to the location of the development and to the type of development. In addition to certain statutory exemptions from paying DCCs, local governments can specifically waive or reduce DCCs for the following types of development:

- not-for-profit rental housing;
- for-profit affordable rental housing;
- a small lot subdivision that is designed to result in low greenhouse gas emissions; and

⁵² *Local Government Act*, R.S.B.C. 1996, c.323 s.920 (7).

⁵³ *Local Government Act*, R.S.B.C. 1996, c.323 s.920 (10).

⁵⁴ *Local Government Act*, R.S.B.C. 1996, c.323 s.919.1 (1) (h-j).

⁵⁵ *Local Government Act*, R.S.B.C. 1996, c.323 s.920 (10.1) and (10.2).

⁵⁶ *Local Government Act*, R.S.B.C. 1996, c.323 s.933.

- a development that is designed to result in a low environmental impact.⁵⁷

4.5 Conservation Covenants

A covenant is a voluntary agreement between the landowner and a covenant holder through which the landowner agrees to protect the land as described in the covenant document. The covenant holder is usually a local government or an approved non-governmental organization whose role is to monitor and enforce the covenant to ensure that the landowner is using the land as spelled out in the covenant document. When registered on the title to the land,⁵⁸ covenants endure into the future and apply to whoever owns the land. This ability to bind future owners helps to ensure that land protection can occur for the long term.

Covenants often apply to a whole or part of a site that has ecologically important features.

Covenants may contain provisions:

- directing land uses or the use of buildings;
- establishing how land is to be built on;
- prohibiting subdivision of land or allowing it only in accordance with the covenant; and
- specifying that certain features, such as wetlands, areas of trees or other ecosystem features, be preserved, enhanced, restored or kept in their natural state.

4.6 Leases

A lease is an agreement between two parties (typically a land or property owner and a tenant) that sets out the short and long term rights and responsibilities of each party. In addition to what space will be secured through the lease and how much will be paid for that space, the parties agree to who is responsible for what activities on the land. The space can be either a portion of the property or buildings. Responsibilities for building upkeep, paying for renovations, and utilities, and the expected behaviour of tenants, staff and visitors in the building are all common elements in leasehold relationships.

Leases are useful for establishing the conditions under which social enterprises, other non-profit organizations and individuals may operate activities on the property. Leases can refer to management plans and other documents as establishing the ecosystem-based framework within which all activities must occur on the site.

⁵⁷ *Local Government Act*, R.S.B.C. 1996, c.323 s.933.1 (1).

⁵⁸ In B.C. registration occurs pursuant to the *Land Title Act*, R.S.B.C. 1996, c.250 s.219. For a detailed description of the use of conservation covenants see *Greening Your Title* (3rd Ed.) (2013) (Vancouver: West Coast Environmental Law)

4.7 Mortgages

A mortgage is a debt that is secured in reference to land. Mortgages are usually registered on the title to land to evidence the debt of the landowner. A mortgage on title ensures that the landowner does not sell or further encumber the land without taking into account the creditor or organization/person who provided the financing.

Typically mortgages are between a landowner and a financial institution. However, for land conservation initiatives mortgages are sometimes between individuals, organizations, or businesses and the landowner conservation organization. As described below, repayment of mortgages by groups of community members and other creative arrangements are often part of the business or governance model for non-profit collaborative conservation efforts.

5. Business Models

Land acquisition and management usually requires a corporate structure, such as a non-profit organization, cooperative, or company, as the legal entity through which activities can take place. Choice of corporate structure involves a complex weighing of governance and financial goals. Typically, the business model or operationalization of conservation management plans involves several corporate structures (governance and financing), legal arrangements such as use of land secured by leases, and funding sources. As each property is unique, so too is each business model adopted by conservation organizations.

It is important to note that this is a complex area of law that has tax, governance, and financial implications for which professional advice should be sought.

5.1 Land Acquisition

Conservation organizations employ a variety of strategies to secure funding for the acquisition of land. While not necessarily different than those used to simply preserve an ecologically important parcel, the opportunity to generate income from a site may expand the options available for funding, in particular the ability to obtain and pay a mortgage from leases, eco-forestry and other revenue from the property.

Some funding approaches include:

- Donations of land, financial instruments, cash and services;
- Bequests;
- Grants from government agencies and foundations;
- Mortgages, secured on the land, by supporters or by a third party; and
- Other products such as community-oriented investment offered by credit unions or the organization itself.

Funding in the amount of \$3.5 million for the acquisition for DL57 came from the Natural Areas Conservation Program grant (NACP), a bequest, and a loan from Vancity Credit Union. The NACP grant requires a management plan for the land that is reviewed every five years and a mortgage registered on the title to the property in favour of the Nature Conservancy of Canada to secure the conservation and restoration commitments. Community members and supporters of the Galiano Conservancy Association guaranteed the loan from Vancity and pledged to make monthly payments. In addition, the Galiano Conservancy also established an endowment fund for the management of the property in the amount of \$370,000.

At this early stage in the governance of DL57, the vision is for a committee of the Galiano Conservancy Association board to oversee, monitor and review the progress of the management plan and activities on the site. In support of that committee, other board members and supporters will advise on site management. It is anticipated that it will take four years to fully implement the management plan, which includes securing donations to hire additional staff and build the infrastructure needed. The goal is for the site to be self-sustaining: over the long term revenue in the form of social enterprise will pay for the activities on and management of the site.

The management plan identifies potential social enterprises for the site, such as agro-forestry, agriculture, and eco-forestry. Some of these social enterprises could also provide materials for construction of the Learning Centre itself, as well as provide materials for businesses on Galiano Island. There is a significant educational potential on the property for school groups from the urban areas of Victoria and Vancouver, as well as field schools from School of Environmental Studies at the University of Victoria.

The business plan, as the operational plan of the conservation planning, focuses on DL57 as a restorative retreat or education centre for underserved youth. Activities could include hands on ecological restoration, learning by living with a focus on sustainable infrastructure systems, and leadership development. Using a sliding scale for payment, the variety of education programs offered would also follow a social enterprise model.

The Gabriola Commons is a non profit organization on Gabriola Island dedicated to nourishing the social fabric of the community, ensuring the ecological sustainability of the land and assets as a public trust for future generations, and to provide ongoing community service.⁵⁹ Their primary activity is the purchase of the Gabriola Commons, a 26 acre property across from the school, as the social heart of the community. The vision is to house service organizations, agriculture and primary

⁵⁹ <http://www.gabriolacommons.ca>

processing, community celebrations, community kitchen and workshop, and an assisted living facility for seniors. The land acquisition was funded by donations from community members and a mortgage that individuals agreed to contribute to paying on a monthly basis.

5.2 Governance Models

Most conservation organizations take the form of a not-for-profit organization that is incorporated or continued under the law of the province in which they are located or federally under the *Not-For-Profit Corporations Act*. The organization can hold property and if registered as a charity issue tax receipts for donations. Other governance models may be more appropriate for certain mixed-use conservation initiatives. For example, if there will be residents on the property who are going to construct homes, a cooperative, corporation or Community Contribution Company (in B.C.) may recognize more transparently those individuals' contribution of capital to the site. Likewise, some structures can better reflect governance that is in keeping with individual investment or democratic principles. Cooperatives retain a "one member, one vote" rule while companies can weigh voting on important decisions in favour of a conservation organization owner or those entities/individuals that have invested the most in the venture.

The long term success of conservation management depends in no small part on how decisions are made about the property. Therefore, careful attention should be paid to corporate and governance structures before the site is acquired.

The governance of Yarrow Ecovillage is through a cooperative association or co-op under the B.C. *Cooperative Association Act*. Based on one member, one vote, individuals must be members to live on the site. Members typically fund infrastructure and other projects, with additional funds coming from foundations and other grants. Yarrow Ecovillage members are contemplating a transition to a strata corporation model under the *Strata Property Act* for some of the housing because it is easier for individual members to acquire financing through a strata governance structure.⁶⁰ Members and others operate enterprises on the site that are governed by leases that require adherence to the overarching principles and objectives of the ecovillage.

Partnerships are critical to bringing the diverse expertise and resources to conservation management that are needed for project success.

⁶⁰ Curran, D. (2013). Finance, Ownership, Governance: Models for Common Ownership (Shawnigan Lake, B.C.: OUR Ecovillage).

6. Conclusion

Integrated conservation planning using ecosystem-based management principles is a natural evolution of land acquisition for environmental health. This transition to sustainable rural and regional economies that combines land protection with social enterprise offers unique place-based opportunities for the achievement of biodiversity and community economic development goals. With this move to mixed-use planning and enterprise, the complexity of conservation management increases significantly. Not only are landowners managing an ecological landscape, but also human activities that can require significantly more built infrastructure and thus regulatory approvals that address public health and safety concerns. However, this complexity can be managed using adaptive management approaches, partnerships and a variety of business structures. As conservation and other organizations continue to provide models for integrated conservation planning and management, the importance of this approach can be measured across the landscape as a contribution to regional biodiversity and community economic development.

Resources

Best Management Practices Guide for Stormwater (Greater Vancouver Sewage and Drainage District 1999)

<http://www.metrovancouver.org/about/publications/Publications/BMPVol2a.pdf>

Diana Leafe Christian, *Creating a Life Together* (2003) and *Finding Community* (2007) (Gabriola Island: New Society Publishers)

Finance, Ownership and Governance: Models for Common Ownership
(URL forthcoming)

FireSmart Manual (BC Ministry of Forests, Lands and Natural Resource Operations 2003)

<http://embc.gov.bc.ca/ofc/interface/pdf/homeowner-firesmart.pdf>

Green Bylaws Toolkit (Wetlands Stewardship Partnership 2007)

<http://www.greenbylaws.ca>

Green Infrastructure Guide (West Coast Environmental Law 2007)

http://www.obwb.ca/groundwater_bylaws_toolkit/

Greening Your Title: A Guide to Best Practices for Conservation Covenants 3rd Edition (West Coast Environmental Law 2013)

URL forthcoming

Groundwater Bylaws Toolkit (Okanagan Basin Water Board 2009)

http://www.obwb.ca/groundwater_bylaws_toolkit/

Land Development Guidelines for the Protection of Aquatic Habitat (Department of Fisheries and Oceans 1993)

<http://www.dfo-mpo.gc.ca/Library/165353.pdf>

Planning for the Distribution of Reclaimed Water (AWWA Manual M24 2009)

<http://www.awwa.org/portals/0/files/publications/documents/toc/M24ed3.pdf>

Passive Solar Design Strategies: Guidelines for Home Building (Passive Solar Industries Council, undated)

<http://www.nrel.gov/docs/legosti/old/17252.pdf>

Stormwater Planning: A Guidebook for British Columbia (Ministry of Water Land and Air Protection 2002)

<http://www.env.gov.bc.ca/epd/mun-waste/waste-liquid/stormwater/>

Topsoil Bylaws Toolkit (Okanagan Basin Water Board 2012)

http://www.obwb.ca/topsoil_bylaws_toolkit/

Water Balance Model for British Columbia (waterbalance.ca)

<http://waterbalance.ca>

Water Conservation Planning Guide for British Columbia Communities (The POLIS Project on Ecological Governance 2009)

<http://poliswaterproject.org/sites/default/files/Water%20Conservation%20Planning%20Guide%20v1.0.pdf>