

Farming in an Agriburban Ecovillage Development: An Approach to Limiting Agricultural/Residential Conflict

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Abstract

A growing desire for local food systems has increased interest in peri-urban farming, leading to the rise of agriburban landscapes, in which a desire to farm or to be near farmland is a contributing factor to development patterns. Interviews and site visits to the Yarrow Ecovillage near Vancouver, Canada, outline an example of a development that allows new farmers access to land in a setting with few tensions between farming and non-farming residents in a zone on the edge of a protected agricultural region. Although there are limitations to replication of this model, we suggest that intentional settlements with an agricultural element on the rural/urban fringe could buffer traditional tensions between farm usage and residential usage, while allowing small-scale farmers a place to farm in areas with prohibitively high land values.

Keywords

peri-urban agriculture, agriburbia, residential/agricultural conflict, ecovillages

Introduction

Urban expansion can place significant pressure on agricultural land; processes of suburbanization and patterns of urban sprawl can have profoundly detrimental effects upon local food production and regional food security. Competition over land use is particularly notable in cities with topographic constraints on growth. As such, many cities have implemented strategies to protect peri-urban farmland, whether by explicitly addressing agricultural capacity or by adopting policies to discourage sprawl. One of the most common measures for the protection of local agriculture involves drawing boundaries upon the land, which effectively delineates areas that are off-limits to urban expansion. While the protection of farmland is essential, the creation of boundaries can artificially separate human society from agricultural production. In essence, the boundaries imposed in many places have helped create three solitudes of land use: urban, nature, and agriculture. Maintaining a focus on large-scale agriculture on expensive near-urban land can also present a steep barrier to entry for new farmers. The potential for novel land ownership models to mitigate these undesirable limitations to access, increase in cost, and separation of uses is interesting but underexplored.

Rural/urban boundaries generally take one of two forms: either they bound the city or they bound the farms. Although both forms aim at the preservation of agricultural land, they can have different effects. The second type of boundary is exemplified in British Columbia, which maintains an Agricultural Land Reserve (ALR). Although urban areas can

expand into the countryside, highly productive agricultural land is excluded from most residential, commercial, and industrial uses not directly related to farming. Vancouver, the urban core at the center of the Lower Mainland's ALR inventory, has been called a "growth magnet" and is currently expanding rapidly (Leo & Anderson, 2006); much of this growth has taken the form of increased density, supported by improvements to urban infrastructure, yet it has also fostered suburban sprawl and resulted in the loss of agricultural lands from the ALR (Condon, Mullinix, Fallick, & Harcourt, 2010).

Whether a city or its farm is bounded, the imposition of boundaries separates residential land uses from agricultural production. This is a necessary measure to protect farmland, as the dominant valuation of land, rooted in utilitarian rationales, privileges economic development over agricultural capacity (Mariola, 2005). As Blomley (2002) pointed out, urban planning and development policies invoke a Lockean narrative to justify land-use decisions, following the idea that property rights are rooted in the "highest and best use" of land. Such "improvement" in land is measured in terms of economic development, which continues to provide the

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dominant justification for land-use decisions. Urban land uses foster higher economic returns than do agricultural production; as such, in the absence of specific protections for farmland, urbanization is correlated with a loss of agricultural land (Thompson & Prokopy, 2009). Importantly, suburban sprawl is implicated in the transformation of prime soil and of the most fertile growing areas into impervious surfaces that cannot be reclaimed for food production (Hasse & Lathrop, 2003). Although they separate human society from agriculture, boundaries can be an effective policy tool for the preservation of agricultural land in a hostile economy (Bengston, Fletcher, & Nelson, 2004). Nevertheless, for those who would combine an urban lifestyle with an agrarian ethos, boundaries can be barriers. This article examines a case study into a blurring of this boundary in which dense residential development directly abuts farmland under the control of the residents, creating an “open” boundary, while maintaining strict farm use within the ALR. We see such a project as an example of an agriburban form and documented its effect on residents. The goal of this study was to determine the efficacy of such a project through interviews with both farming and non-farming residents.

Agriburbia

The term “agriburbia” originates from research by Sandul (2010), deriving from a historical survey of housing development in Southern California. For Sandul, an agriburban neighborhood is one in which agricultural capability is a key selling point for potential residents. Communities such as Ontario, California, were specifically designed to allow residents to grow citrus for profit; moreover, right from the planning stages, provisions were made for the establishment of agricultural cooperatives in such communities. Defined as “a suburban form in which horticulture plays a significant role or enticement” (p. 38), agriburban neighborhoods were proximal to the city, contained a rural civility and urban amenities, and featured high-value crops grown on small lots. Advertisements for agriburban communities, such as the town of Ontario, highlighted the advantages of a home citrus grove, along with promises of low crime and a clean environment. This shift has also been described as *agricivism* (Ingersoll, 2006) or the integrating of cultivation into urban form. This type of development is associated with a different valuation of agriculture than the dominant utilitarian rationale, what Mariola (2005) viewed as an agrarian ethic.

If a desire to preserve a local food system is stronger than the desire for urban expansion, agriburban landscapes can emerge. Nevertheless, urban growth can displace both farmland and wildland; unchecked processes of urbanization and suburban sprawl, as well as the fragmentation of land uses, pose a significant hazard to nature and agriculture. Erosion of the agricultural base of an area through fragmentation can raise operating costs for farmers, and both small parcel sizes and non-contiguous landholdings are associated with low

levels of production and inefficient operating scales (Pfeffer & Lapping, 1995). Farms, then, must be protected from their cities. While boundaries may be necessary to protect agricultural land from processes of urbanization and suburban sprawl, the peri-urban fringe is nevertheless of vital importance. Recent studies in central Canada found that as much as 70% of the population live in peri-urban areas, depending on the region (Gordon & Vandyk, 2010). In addition, much of the country’s best farmland is found near major urban centers, and plays an essential role in feeding those cities (Agriculture and Agri-Foods Canada, 2009). Peri-urban farming is also critical for the success of the regional food movement (Newman, 2009), and combats the low visibility of the urban food system (Pothukuchi & Kaufman, 1999). Strong growth in farmers’ markets has helped create a demand for local food that helps overcome the fact that agriculture is politically marginalized in the urban fringe and is easily fragmented by urban uses (Thomas, 1990). Indeed, farmers’ markets in North America have seen an explosion in number since nearly disappearing in the 1970s (Brown, 2002), and those markets sometimes struggle to find enough farmers to supply them (Wittman, Beckie, & Hergesheimer, 2012). Conventional planning partitions land uses within the peri-urban fringe, which not only separates farming activities from the city but also screens agricultural production from view of a non-agrarian residential environment. However, a rise of interest in area farms calls into question the ideology of the buffer; moreover, where there is a desire for agriburban landscapes, the peri-urban fringe provides important opportunities to overcome the artificial separation of human society from agriculture while also protecting the productive capacity of farmland.

Heimlich (1989) drew attention to the difference between farming in rural areas and farming in the city’s shadow; metropolitan agriculture interfaces in important ways with the city, including through selling food to urban consumers and taking advantage of niche markets created by environmentally conscious consumers. Urban farmers’ markets play a critical role for peri-urban producers (Stagl, 2002), and although these markets are largely located near the urban cores, the vendors regularly come from the peri-urban fringe rather than from either the city itself or the larger farms in the lands beyond fringe zones (Ling & Newman, 2011). The demand for land near the city also influences peri-urban agriculture; in many places, metropolitan farms are half the size of most rural farms, yet farmland values are double (Heimlich, 1989). Accessibility to the urban core has been shown to drive up net returns on agricultural production, as well as the value of the land itself (Livanis, Moss, Breneman, & Nehring, 2006). The myriad ways in which the rural and urban are linked belie the spatial segregation of farms from cities. However, the desire to live near agricultural production or to integrate farming into urban life contradicts dominant planning practices in many metropolitan regions—including the Vancouver area of British Columbia, discussed below. Small

farm size, high land values, and a ready urban market all pave the way for a landscape of high-value farming, but recent reports have underlined the difficulty young farmers are facing in securing suitable land at a reasonable cost (Agriculture and Agri-Foods Canada, 2009). As will be explored in further depth below, the policy of the Agricultural Land Commission (ALC) in British Columbia has been to strictly separate farming and residential development (ALC of British Columbia, 2012).

Vancouver and the ALR

In the province of British Columbia, most agricultural land is protected by the ALR. Canada was one of the first regions to specifically use land-use regulation in an attempt to preserve agricultural production of the land (Tomalty, 2002); British Columbia has limited productive agricultural land, and the ALC estimates that, prior to explicit land protections, 4,000 to 6,000 ha of productive lands in British Columbia were converted annually to non-agricultural purposes (Provincial ALC, 1983). As most of the province is mountainous and not suitable for agriculture, there was a broad consensus that some limit to development was needed. In 1973, the Land Commission Act was passed including a mandate to zone agriculturally productive lands as protected farmland, dubbed the ALR. The 1973 implementation of the ALR is an early example of a North American land-use regime that intentionally encourages an agriburban landscape, as the reserve is not contiguous; in certain regions, some parcels are included while others are not, creating a mosaic of land uses in those regions. Some parcels are too small for industrial-level production, or are surrounded by residential development; using this land effectively is sometimes difficult.

In general, the policy of the ALC is to establish permanent buffers between farming areas and residential areas through the use of trees, roads, ditches, and fencing. They recommend dividing ALR land from nearby residential neighborhoods with a hardened boundary, which inhibits interaction between the two land uses. Commercial agricultural production, particularly the dust, smell, and noise concomitant with large-scale farming operations, is framed as an intrusion upon the enjoyment of residential landscapes (Hammond et al., 2010).

The dualism between human and agricultural land uses mirrors that which Cronon (1995) identified as existing between nature and culture; the idea that the natural world is intrinsically free of any human presence is empirically incorrect, yet allows humans to distance themselves from any responsibility for the nature that exists in spaces given over to human uses. The residential/agricultural dualism, like the false nature/culture dichotomy, marginalizes food production in urban and suburban areas, while also psychologically distancing human society from the land that feeds them. However reified a dichotomy may become, it is always open to contestation. Of interest to this case study was whether

people who intentionally moved to this fringe voiced the same complaints and concerns about farming activity, and whether the attitudes of the farming component of the community differed from the non-farming component.

The ALR has been critical to preserving agricultural land in British Columbia over the last 40 years. Our team's own research (forthcoming) shows a loss of about 10% of the agricultural land base in the region. This supports previous work by Stobbe, Eagle, Cotteleer, and van Kooten (2011), who noted that before the ALR was put into place 1.5% of the land base was lost annually. Stobbe, Cotteleer, and van Kooten (2009) also remarked on the value of farmland external to simple agriculture: They note contributions to aesthetics, protection against sprawl, and contributions to a vibrant local food sector. Irwin (2002) noted the premium paid for open space and views, particularly if it is permanent. However, Stobbe, Eagle, and van Kooten (2010) also argued that there are downsides for farmers that vindicate the need for a harder boundary, including congestion, theft, and vandalism on farmland. However, they also point to the potential for agritourism, potential for off-farm employment, and access to urban specialty markets as benefits to farmers operating on the peri-urban fringe. Farming the land, and helping farmers to find land, should be a priority.

Agriburbia in Practice: The Yarrow Ecovillage

Our goal in this project was to investigate an attempt to combine residential and farm use in a densely developed ecovillage on the rural/urban fringe. To those unfamiliar with the region, land costs are highly prohibitive; as much as 50,000 Canadian dollars an acre for land inside the reserve. As an intentional community, the Yarrow Ecovillage represents a self-described attempt to build a creative and mutually supportive society that promotes the connection of humans with their natural environment, while also minimizing ecological impacts. Intentional communities traditionally involve a deliberate attempt to create a positive environment or an alternative lifestyle outside mainstream society (Meijering, Huigen, & Van Hoven, 2007; Poldervaart, 2001), and often involve collective ownership of land or resources. Members join voluntarily, usually forming such communities and creating their governing structures on the basis of commonly held ideologies or shared social, political, religious, or ethical values (Meijering et al., 2007; Shenker, 1986). Such communities are attempts to create an entire way of life; Sargisson (2001) noted, "Intentional communities are defined according to the intentions of the people who live in them and the *raison d'être* of the community itself" (p. 68). Ecovillages are a specific type of intentional community defined by their attempts to foster environmental sustainability and connections with nature, based on shared environmental values.

The ecovillage explicitly attempts to overcome the perceived nature/society divide, as well as the built environment

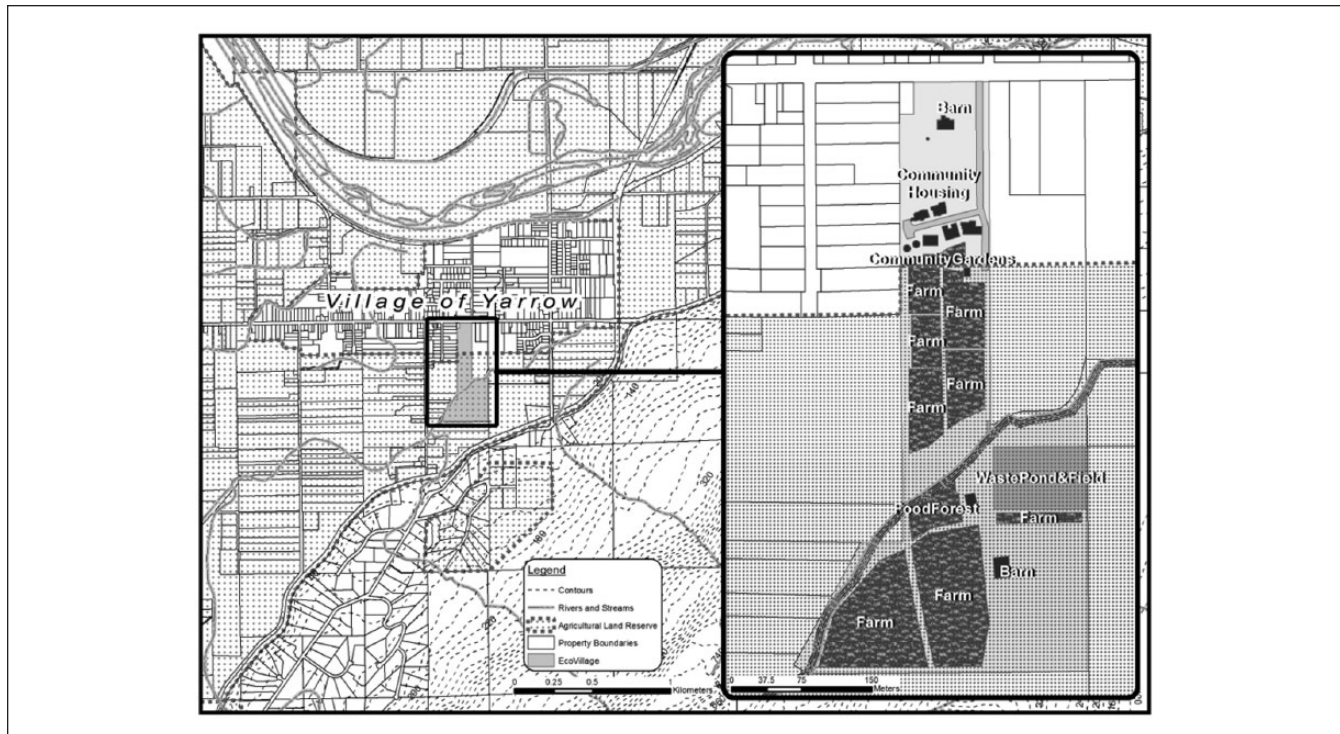


Figure 1. Layout of the Yarrow Ecovillage.

that separates humans from the natural world; this has been an important goal of the ecovillage movement in general (Kasper, 2008). Like in ecovillages elsewhere (e.g., Kirby, 2003), residents of the Yarrow Ecovillage wish to create a community of neighbors, while also redefining the relationships typical of mainstream North American society. Ecovillages not only stand as an implicit critique of this society but also represent a belief in an alternative. Within the Yarrow Ecovillage, there is a redefinition of relationships among residents, land, and food. As Kirby (2003) observed, “It is the marriage of environmental concern and community building that distinguishes the ecovillage movement from other intentional communities, both historical and contemporary” (p. 323).

Method

In late 2013, the authors conducted a case study at the Yarrow Ecovillage located within the urban/rural interface between the edge cities of Abbotsford and Chilliwack, which are part of the Fraser Valley Regional District near the city of Vancouver, Canada’s third largest city. Vancouver’s conurbation fills the Greater Vancouver Regional District and spills into the Fraser Valley Regional District, and is constrained within the Fraser River Delta, with the Gulf of Georgia to the west, the U.S. border to the South, and the Coast Range of mountains to the North. The city thus sprawls east, up the valley. The research site is located in the town of Yarrow,

once a stop on Vancouver’s interurban railway. Yarrow is roughly halfway between the delta mouth and the point where the Cascade mountain ranges and the Coast mountain ranges meet.

We used a single case study methodology using a multiple interview approach. We documented an emerging example of mixed retail, residential, and agricultural development on a single 25-acre site. Following Yin’s (2003) model of case study methodology to examine a contemporary phenomenon occurring in a real-life context, we conducted semi-structured interviews, site visits, and performed a textual analysis of related gray literature and literature produced by the residents. In addition, we created a digital map of the site using GPS; this map was shared with the ecovillage. Although single case studies cannot be extrapolated to draw broader conclusions, they are an appropriate methodology when a holistic, in-depth investigation is needed (Feagin, Orum, & Sjoburg, 1991). The case study was chosen through examination of current gray literature and was selected on the basis of expected information content using the method outlined in Flyvbjerg (2006). Multiple interviews were conducted at the site and then transcribed and coded. Multiple participants from both farming and non-farming groups at the ecovillage were chosen to create the opportunity to compare and contrast lived experiences.

The Yarrow Ecovillage comprises private housing, community gardens, agricultural land, and a commercial zone at the front of the property (see Figure 1). There are 33 private

residences on the property. However, the houses are close together and connected by a common path, creating a landscape that fosters interaction between neighbors. Roadways are kept narrow and are used as a common space. The Yarrow Ecovillage housing development is called Groundswell; a second development, Elderberry, is currently being planned. Elderberry will be a cohousing development for adults 50 years and older, and has the goal of creating a seniors' community near agricultural land and workshop space. The commercial zone at the front of the property currently houses the Yarrow Deli, and is also where farm products are sold to members of the public in the summer. Plans are currently in place to expand retail at the front of the property.

At the back of the property, furthest from the commercial zone, are two different sections of farmland. Both these fields are on ALR land. Between the north field and the housing are community gardens, which are not on ALR land but are situated just on the other side of the boundary. The south field is furthest from the housing development and is separated from the north field by a stream, and is thus where most of the agricultural production requiring heavy machinery takes place. The Yarrow Ecovillage also features on-site wastewater treatment; as a rural community, the ecovillage is not connected to the municipal sewage system. The wastewater treatment plant is a part of the community's commitment to pursuing a responsible connection with their surrounding environment, and was chosen for being both more effective and more environmentally sustainable than septic fields.

The Yarrow Ecovillage Community Farm covers 20 acres of land, and is certified organic. The land is owned collectively through the Yarrow Ecovillage Society Cooperative, and it is through this body the land is leased to farmers. Research into farmland soil conservation has shown that farmers plant more sustainable crop rotations on owned land than leased (Fraser, 2004), yet this system of land tenure blurs the dichotomy between owned and leased land. There are currently four different commercial agricultural businesses operating on this land, including three vegetable farms and an heirloom apple orchard. Each of these are for-profit corporations, essential for the livelihood of its farmers, and each of the businesses have made explicit commitments to farm in a manner as socially responsible and environmentally sustainable as possible. The farming conducted is primarily plant-based, though a small flock of laying hens is kept on the farm. Plans to expand the role of the chickens in permacultural agriculture on-site are in progress. As well as selling off-site, the farmers collaborate to offer Community Supported Agriculture (CSA) harvest boxes; the CSA program helps local residents have guaranteed access to the products of the harvest, while also ensuring year-round financial support for the farming businesses. During the course of our research, this idea of a mutually beneficial relationship and immediate sense of connection between community residents and the surrounding farmland and farmers

was regularly highlighted as one of the important benefits of living in the Yarrow Ecovillage. Importantly, the community provides alternative social, political, intellectual, and economic spaces, exactly of the sort that Feenstra (2002) claimed are necessary for sustainable agricultural systems.

Interview Results

The central premise of agriburbia, as Sandul (2010) presented it, goes far beyond the simple existence of places that mix agricultural and residential land uses; rather, the premise is that this mix of land uses can create a desirable landscape where people will want to live. An agriburban development that mixes housing and farming is supposed to serve as a draw, a landscape that entices. We can see that the Yarrow Ecovillage mixes agricultural and residential uses, as do other communities in the Fraser Valley Regional District of British Columbia. However, to claim that these communities are agriburban developments, we must understand the reasons that people relocate here.

During visits to the Yarrow Ecovillage, we met with residents, spoke to them about their community, and began to learn of their desires for and understandings of the landscape in which they live. Following this initial research, we conducted in-depth interviews with selected residents from both the farming and non-farming population. Each of the people with whom we spoke claimed that the farmland and the agricultural orientation of the Yarrow Ecovillage were fundamental to their decisions to live there. A number of residents were also farmers; for the farming families, they came to the Yarrow Ecovillage in search of affordable agricultural land and stable farm tenancies. However, even for those who did not work in the land or were not actively farming, the agricultural land on the property and the desire to live near food production was still the most significant aspect of their housing choices.

The farmers we interviewed had all been engaged in farming prior to relocating to Chilliwack. While discussing their decisions to move to the Yarrow Ecovillage, they spoke of the difficulties young farming families face, illustrating how these challenges drove them to look for an alternative model. One farmer and ecovillage resident described her search for a place to establish a permanent farm; she and her husband had been farming on rented land, but after losing two subsequent farms in the Okanagan—the first when the landlord chose to build a house on their farm, and the second when the landlord's son moved back to his parents' property and chose to take over the land on which their farm was located—they spent months touring land throughout British Columbia and Ontario, looking for a place to set up a permanent farm. They chose the Yarrow Ecovillage, she said, because of the protections in place for the farmers that offered stability and permanence. This, she claimed, “was the best option we could find, where we could afford to live and have some farm security.”

Another couple with whom we spoke wanted to farm in Chilliwack because of the land; they had previously been farming in Osoyoos, but the conditions were not as favorable. The long-growing season and more temperate climate of Chilliwack was an important draw, as was the high-quality soil on this particular parcel of land, yet leasing any of the sections of land in the area would have been unaffordable if not for the cooperative land ownership model of the Yarrow Ecovillage. One of them explained,

The whole structure of the Yarrow Ecovillage, and as well, a lot of the ecovillages, the way they do it is that everyone who buys a home is sharing the cost of the land, and that makes it affordable for us to farm here, like even if it was, you know, down the road and we had to try and buy that land and farm there, we wouldn't be able to farm down the road on our own. It's only because of the community there that supports farming that we were able to come here and do that, so the agriculture played a key role in us coming here . . .

The other residents of the area specifically wanted people to farm the land and were willing to subsidize farming. This couple wanted to farm, so the model was mutually beneficial. Although farming was the most important draw for both these families, the community was nevertheless important. One of the families had a specific interest in ecovillages, and spent years researching them before deciding to move in. When they toured the land, they "just fell in love" with the community. They visited and researched other intentional communities—all 53 of the ecovillages and cohousing communities in British Columbia—but decided that the Yarrow Ecovillage was the best fit. The combination of a close-knit residential community and high-quality, affordable farmland quickly convinced them to move in, a decision they feel was very positive. The other farmers with whom we spoke prioritized farmland specifically when deciding where to live, but claim that the residential community has been an important factor in their happiness with where they live. For one,

the community aspect, and also just the opportunities that this certain living arrangement provides has been a really major factor in my satisfaction with living here, and in a way it's played more heavily into my life than the farming has.

Access to local food and connection to the food system are important to residents of the Yarrow Ecovillage, although the benefits of local food production reach beyond the property. The majority of the food produced on the farms of the ecovillage is sold off-site, much of it at the Chilliwack Farmers Market. The produce is also sold at the gate of the ecovillage, and customers from the immediately surrounding area as well as from further afield come to purchase organic food directly from the farmers. The majority of the residents of the Yarrow Ecovillage do not actively farm the land, although many maintain plots in the community gardens located between the residences and the ALR. Nevertheless, the non-farming residents with whom

we spoke also pointed to the importance of agriculture in their decisions to live in the community and in their ongoing satisfaction. For one, agriculture was "one of the prime things" motivating their decision to move to the Yarrow Ecovillage. Being able to grow food or to have access to where it is growing forms an essential part of her preferred lifestyle, as well as how she and her husband are able to raise three children and ensure that the family eats primarily fresh, organic foods while living "on the so-called poverty line." Moreover, she feels that both the farm and the farm products help bring the residents together and build community. Although this particular resident does not farm, yet she states,

. . . the best parts of living [at the Yarrow Ecovillage] are having your CSA box show up on your doorstep and when the farmers come back from market and they've got tons of leftover and we just stuff ourselves on, you know, goat feta and deep-fried squash blossoms and stuff, it's those moments that it's, we just sit there and laugh where we do outside eating in the summer, no place on earth could we afford to buy that in a restaurant, but it's like this waste of the land there, but we're conscious of it enough to capitalize on it and just treat it as gourmet wonderfulness, so, yeah. It's a huge part of the community . . .

Another resident claimed that, for him, it was primarily important that he live in cohousing; proximity to farmland was only of secondary interest. However, he and his wife had lived in Windsong, another cohousing community in the area, immediately prior to moving to the Yarrow Ecovillage. Although they were happy in their previous cohousing community, the farm was the deciding factor in their choice to move to the Yarrow Ecovillage. This resident noted that his wife was the principal driver in the decision to move; she had wanted to live in a place with more outdoor space and more land to grow food. Although the cohousing model was much more important to him personally than was the farmland, he liked knowing he could access local, organic food, and that he could feel confident in the food he fed his children. He enjoyed making pie, so just as he had previously done in Windsong, he was growing rhubarb at the Yarrow Ecovillage and hoped to soon also start growing apples suitable for pie. Hobby farming played an important role to him and to the other non-farming residents; although they were not engaged in commercial agricultural production and did not rely on farming for their livelihoods, hobby farming and the community gardens on the property contributed to their contentment with their living arrangements. The most common refrain was that they wanted to know where their food was coming from and how it was being grown; one man added that he liked having a personal relationship with the farmers growing his food.

The amount of time that the different residents of the Yarrow Ecovillage spent engaged with farming and agricultural activities varies depending on whether they lease plots of farmland. One very enthusiastic farmer admitted that he spent most of his time thinking about the farm, noting,

I'm thinking about it constantly, year-round, it's the thing I think about most in my life. But I love it. I love thinking about it, I love talking about it, so sometimes I have to stop, and not bombard people with my farm talk.

His wife confirmed that most conversations turned to farming, adding, "I have to tell him to stop talking about farming! I'm done! No more talking about farming!" Although both of them enjoyed living so close to their farm, he noted that the one problem with living right next to the agricultural land was the inability to stop thinking about it, because he could always see it. Nevertheless, he claimed that he would never want to live elsewhere. A different farmer with whom we spoke pointed out how difficult it would be to farm while raising young children if she did not live right beside her land:

Farming really is, it's a lifestyle. It's not a lucrative career choice. For me, especially having a young family, like, if I had to bundle my kids into the car every time I needed to turn on a sprinkler, it wouldn't be worth it. But being able to run out into the field to grab vegetables for dinner, that's one of the things that does make it worth it.

Unlike the farming residents, the other people living at the Yarrow Ecovillage are not engaged with the agriculture on a day-to-day basis. Many have full-time jobs, often in cities outside the area. They take pride in the farm, though, and one resident explained that she did not have to farm the land because she had neighbors who wanted to. She was glad that they could support farmers as well as benefit from the local agricultural production, declaring, "By buying our house and settling there, we are basically creating a long-term, sustainable land reserve for farmers to farm."

The farm is an integral aspect of the Yarrow Ecovillage identity; as one resident stated, "The farm is what makes the ecovillage an ecovillage." The mix of residential, agricultural, and commercial land on one property facilitates the village lifestyle, or "village feeling," as does the fact that the ecovillage offers both housing and employment. One resident suggested that the ecovillage would not be desirable for people who did not want a village lifestyle, but that the space and the opportunity to manipulate the land were attractive to "pioneering folk."

Agriburban Land Use

Contrary to what one might expect from the study of agricultural/residential conflict, none of the residents of the ecovillage with whom we spoke had problems living right next to the commercial agricultural production occurring on the site. Planning around agricultural production in British Columbia has presupposed that people will not want to live next to farming operations, and that residential developments must be segregated from agricultural land. Previous research on

ecovillages suggests that, for a subset of the population attracted to this model of intentional community, the forced separation of human society from the natural environment is undesirable and perceived as something to be overcome; however, ecovillages located in urban areas do not have the same proximity to large-scale commercial agriculture operations and thus have a dissimilar type of separation to overcome (see Ergas, 2010). The Yarrow Ecovillage model locates a built environment designed to bridge the perceived nature/society divide in an area known for heavy agricultural production and large-scale farming operations. Nevertheless, residents indicate that the agricultural orientation of the area is a draw.

Some of the residents we interviewed noted that there is a certain amount of noise involved with the farming, but the community had put in place measures to deal with the noise. Using a consensus process, they had come up with a policy that allowed tractors and other machinery in the north field (closest to the housing) only between the hours of 8:00 a.m. and 5:00 p.m. All of the farmland in the Yarrow Ecovillage is certified organic, and they have covenants in place requiring any farmers who lease the land to adhere to organic standards. Moreover, as the land is used only for small-plot agriculture, they do not use any extremely heavy machinery. There is a certain amount of noise pollution associated with living right next to a commercial farming operation, yet all of the non-farming residents with whom we spoke maintained that the benefits of living next to the place their food was produced outweighed the inconveniences. As one resident stated,

There's much more benefits than there are difficulties. The difficulties that there are just so minute, and so easy to deal with, really, that it just takes a bit of planning, and some good policy, that most of it's just positive.

Residential housing along the border of the ALR is widely considered undesirable because of its proximity to farmland, yet a comment from one of the residents illustrated an important difference between the experience of living in the Yarrow Ecovillage and what city planners generally expect. While outlining many of the reasons she enjoyed living in the Yarrow Ecovillage, she claimed that living alongside the ALR was important to her. Countering the standard view of the area, she stated,

My house is backing onto the ALR, so I like, it's a huge part of it. If I even had to switch a house to the other side of the village, I would be very hard pressed to move, because I get to see the best view in the Fraser Valley, as far as I'm concerned.

It is worth emphasizing the central role that local food and the desire to be connected with food production played in residents' decisions to move to the Yarrow Ecovillage. The fact that all farming on-site is organic is important not only

to liveability but also to residents' goals for the ecovillage. Many of the people with whom we spoke alluded to dissatisfaction with, or distrust of, conventional agriculture and factory farmed products, and to their skepticism of the globalized food system. Furthermore, conventional agriculture and factory farming were seen as a source of alienation between humans and their food systems. The desire to be close to food production and to be able to trust their food and food systems may help explain the reason that residents did not object to living next to commercial agricultural production; this land-use model is successful because the population has a specific interest in local and organic food, and because the agricultural production on-site matches their stated desires and provides them with food they wish to eat. While judging the conventional approach toward the strict separation of residential and agricultural land uses, these factors must be taken into account.

Discussion and Future Directions for Research

The Yarrow Ecovillage provides a contemporary example of an agriburban community in the model that Sandul (2010) documented in his historical study, and demonstrates that residents who intentionally choose to farm or live near farmland are more tolerant of the dust, noise, and smell associated with even the most carefully conducted farm activities. Based on our site visits and interviews, we found that productive farmland was an important draw for residents. The mixed residential and agricultural land uses were considered desirable both for farmers and for non-farming residents; while farmers were attracted to the landscape for pragmatic concerns, and their residential choices were largely dictated by economic exigencies, non-farming residents chose to move to the Yarrow Ecovillage simply for the proximity to agricultural land and food crop production. While distance from agricultural production is commonly assumed to make residential land more livable, and thus more desirable, the residents with whom we spoke professed satisfaction with their decision to live in mixed-use areas. Being close to local, organic food production, and getting to know the farmers who produced their food, was perceived as an important benefit to living in an agriburban landscape. Although the concept of agriburbia derives from an historical survey, the Yarrow Ecovillage provides a contemporary example of this model. Site visits and observation of land uses in the community support the contention that within the Greater Vancouver and Fraser Valley Regional Districts within British Columbia there are pockets undergoing a reemergence of agriburban landscapes, and the results of our semi-structured interviews match Sandul's theories of agriburbia and of agriburban communities. The model suggests an alternative to a hard edge between residential development and farming; although not everyone is well suited to living in such a development, there is a growing interest in local food

and small-lot farming that suggests other such developments could also be successful, and provide an alternative method of buffering farmland from urban development.

Although we had expected to document tensions between residential and agricultural land uses in the Yarrow Ecovillage, we were surprised to find very little tension between living and farming on the site. Any conflicts over land use were easily dealt with within the community; residents had specifically chosen to live next to farmland and were perhaps aware of what this would entail. At the same time, the governance of the farmland, both by the community and by organic farming standards, prevented most of the conflicts that would be expected in the presence of conventional farming; however, limited tensions existed between residents and nearby farming that used conventional methods. It is important to note that residents of the Yarrow Ecovillage are the same people who explicitly chose to live next to agricultural land; either they were drawn to agricultural land to be actively involved in farming, or to take advantage of passive agricultural land uses, such as living close to open spaces or wishing for their children to understand and to be exposed to food production. The community governance of residential and agricultural land uses is clearly important to the functioning of the Yarrow Ecovillage, but may not necessarily be easy to export to a setting where locals did not specifically desire to live in agriburban communities. Nevertheless, the interviews suggest that bridging the divide between agricultural and residential uses, perhaps through an intermediate blended zoning adjacent to the ALR, can reduce conflict on the boundary.

Blurring the divide between residential and agricultural land, as well as between urban and rural, the Yarrow Ecovillage functions as a space of experimentation and as an innovative model of land use in the peri-urban fringe. Importantly, this innovative land-use scheme overcomes the idea of a separation between agricultural use and non-use; those who do not farm the land still use the farmland. Residents of the ecovillage need not even set foot on the land to enjoy its presence, benefiting already from the status it accords their community and the view that lies outside their windows. Moreover, they need not be involved in the physical labor of producing food crops for their contributions to functionally benefit food production, as their financial investment and participation in community governance help make community food production possible. The blurring that exists in this innovative community renders impossible any strict binary opposition; although distinctions such as farmer and non-farmer are useful distinctions that residents deploy to impose order on the landscape, and distinctions between the concepts of residential and agricultural uses render the landscape legible to municipal policymakers and other outsiders, the actual functioning of this transgressive intermediate space illustrates that conventional approaches to the peri-urban fringe are insufficient for agriburban landscapes. Although it was not a focus of this project, we noted that the

site also allowed for agricultural experimentation; methods ranged from conventional organic cropping to experiments with permaculture and biodynamic farming.

The functional illegibility of the way the land-use regimes of the peri-urban fringe are governed in practice suggests that current approaches to regulation may need to be rethought. However, such an undertaking requires additional research. The Yarrow Ecovillage is comprised of a mosaic of land uses; even for an agriurban landscape, it is very diverse. Even within the residential, agricultural, or commercial sections of the land, the specific types of uses are varied. Nevertheless, the community functions as an integrated whole. The Yarrow Ecovillage is a formal structure, with formal decision-making processes and governance methods, which facilitates the coexistence of different land uses. As such, this exploratory study suggests several specific directions for future research. This project has helped illuminate the motivations of individuals who chose to move into a specifically agriurban ecovillage, but research studying the motivations of individual residents of the peri-urban fringe is necessary for understanding the role of agriculture in settlement patterns outside of collective structures. Furthermore, as the ALR plays a crucial role in the specific form that the Yarrow Ecovillage has taken, it would be useful to study other sites with different land use bylaws. In particular, comparing and contrasting agriurban development on the borders of the ALR with settlements in regions with no explicit protections for agriculture would help illuminate the overall role played by the ALR. Given the reemergence of agriurbanism, further study of the possibilities, the benefits, and the drawbacks of such landscapes is necessary to better understand governance models and local needs. The important role of peri-urban farmland in local and regional food security makes this an important area that warrants further exploration.

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