

Planning for Greener Development: Conservation Development and Landon Bay East

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ABSTRACT

This paper has been abbreviated from the original submission. This paper explores some of the impacts associated with current patterns of suburban and rural residential development, how we arrived at this point, and some initiatives that are being put forward to address our current residential land use patterns. In particular, conservation development (design) is examined in detail. Its principles are founded on the work of Ian McHarg's "design with nature" philosophy, whereby the landscape and natural features form the framework for where and what we build. This is in contrast with the more common method of residential development, an approach based more on Le Corbusier's ideals of razing a site to create a "clean slate" from which to work and "...take control and decide in what direction the forthcoming battle is to be waged" (Le Courbusier, 1996: 369). Landon Bay East, a residential development located in Eastern Ontario, east of Kingston, is used as a case study to further explore conservation development in an implemented form. Landon Bay East is a 160-acre subdivision that contains a 65-acre nature preserve within an area identified as an Area of Natural and Scientific Interest by the province and, more recently, as an International Biosphere Reserve (one of twelve in Canada) designated by the United Nations Educational, Scientific, and Cultural Organization (UNESCO). It is examined both as an example of conservation development and in the larger context of "sustainable development". The broad areas of process and outcome examined in this development are: physical form and environment; community and social context; the planning process, and; economic and marketing issues.

Following the case study, there is an overview of some of the issues that arose during the detailed investigation of conservation development and Landon Bay East. This section not only points out barriers but also proposes suggestions for addressing them. The suggestions are based on the need for changes in multiple areas including: regulation reform and accessibility to new options; communal sewage; coordination of public and non-governmental resources; developer reform; public education and stewardship; land trusts and conservation easements, and; monitoring programs. The paper concludes that conservation development may offer a viable solution to addressing problems inherent in our current patterns of residential land use development, but must be used in conjunction with other tools. The framework for a comprehensive program in Ontario is not yet present and barriers will need to be addressed before this type of development can proceed on more than an individual site basis.

OVERVIEW & ISSUES

WHAT'S THE PROBLEM?

As stated by Bill Rees, a well known and respected researcher in the field of sustainable development,

"The evidence suggests...that we may be fast approaching absolute limits to material economic growth. We no longer have the luxury of 'trading off' ecological damage for economic benefits if we hope to have a sustainable future. The maintenance of global ecological integrity necessarily becomes our highest priority and must be...taken account of in every local and regional development decision" (Rees, 1990: 23).

The trade-offs that we have made, and continue to make, in our residential land use patterns are of particular concern. Residential use consumes over 50% of the total area of the land base in most Canadian cities. This does not include the miles of roads and associated auto-oriented shopping malls they tend to encourage which, if taken into account, would likely consume over 70% of the land in cities (Tomalty and Paul, 1999). If we are to take the sentiments issued by Bill Rees seriously, residential land use patterns are the first place we should look to where changes can and should be made if we are to reverse the trend of declining ecological and environmental resources, critical to our well being.

HOW DID WE GET HERE?

Historically, patterns of development have tended to be compact with a mix of uses, and relied on the carrying capacity of the land to define the extent of development (Hoffman, 2001). Currently, development tends to separate uses and huge tracts of lands are devoted exclusively to residential subdivisions, which requires the use of a vehicle to access shopping, employment, or recreation. What has led to the predominant pattern of development now seen in Southern Ontario which significantly contributes to the problems outlined in the previous section?

CONVENTIONAL GREENFIELD DEVELOPMENT

In 1853, the first comprehensively designed suburban residential development of Llewellyn Park near West Orange, New Jersey was built. With increased pressures for housing and the baby boom demands, the suburbs consisting of subdivisions built on greenfields at the edges of the city became the most prevalent form of housing. In the United States, during the 1950's more than 1 million acres of farmland were bulldozed each year and, of the 13 million homes built between 1948 and 1958, 11 million were built in the suburbs (Kismaric, 1996).

CURRENT PLANNING AND POLITICAL FRAMEWORK

In Ontario, while planning is ultimately the responsibility of the province, there are many other influences and jurisdictions which contribute to land use decisions and patterns of development, not the least of which is the development industry itself. While it is beyond the scope of this paper to look at this topic in great detail, some of the situations that have given rise to the prevalence of sprawl development are outlined below.

LACK OF REGIONAL OR LARGER SCALE PLANNING

There has generally been a lack of inter-regional planning in Ontario, with planning decisions often being made on a municipality-by-municipality basis with little consideration for ecosystem-based planning. Without regional-based planning, it is difficult for a single municipality to raise the funds or implement the policies and systems needed to support more effective development patterns (Pim and Ornoy, 2002).

LAND SPECULATION

Land speculation occurs when developers purchase land beyond the urban envelope at relatively low prices compared to their potential value when developed. Rather than buying the land outright, the developer may also enter into an agreement with the owner (primarily farmers) to purchase the land at a later date, providing the farmer with incremental payments or benefits until the site is approved for development. As the community grows, the value of the land rises and the owner approaches the local council about rezoning the land from agricultural or rural to urban uses. A decision to rezone the land dramatically increases the land's value and represents a windfall profit for the owners.

The development community has a lot of political power at the local level and can play a significant role through their influence in decisions about whether or not to rezone land, or when to rezone it. Furthermore, many farmers support this rezoning as well. With so much of their money tied up in the land, and farming becoming economically unfeasible in the shadow of urban development, the money from the sale is seen as a return on investment or a retirement fund. As the provincial policy statements currently stand, agricultural land is not well protected and it is often seen more as a "holding" designation until such time as it is needed for development. Economic support for the farming community to maintain the lands as agricultural is also generally lacking in Ontario. This makes it difficult for individuals involved in agriculture to remain so, especially when being offered large sums of money to "sell out".

INEFFICIENT DEVELOPMENT AND BUILDING STANDARDS

Current standards guiding development in Ontario have their origin in the values and imperatives of the 1950's to 1970's, when public expenditures were high, costs were relatively low, and environmental concerns were not as big of an issue. These excessive standards have contributed significantly to creating the urban sprawl that is now seen across many communities in Ontario. For example, the traditional standard right-of-way width for local streets is 20 m to accommodate sidewalks, utilities, street parking, and access for emergency vehicles. Not only does this standard impede the ability to create more compact communities, it also contributes to situations where it is not uncommon to have a residential subdivision covered by 55 to 60% impervious paved surfaces (Pim and Ornoy, 2002).

AESTHETICS AND THE ROLE OF PERCEPTION

To many, the concept of aesthetics evokes the image of trivial decoration, and social conformity does not seem congruous with social change. However, aesthetics and conformity have a fundamental affect on how we see the world and an understanding of this may be beneficial in altering ecological perceptions and practices.

One of the most difficult obstacles to overcome is the role of public attitudes and what is considered a culturally acceptable landscape aesthetic. Numerous reports and papers document the problems faced by municipalities and organizations attempting to naturalize an area. There has been widespread dissension in municipalities attempting to implement pesticide by-laws, for fear that the “perfect lawn” may be overrun with weeds. Recent studies by Evergreen, a leading Canadian organization which promotes urban naturalization through both hands-on projects and advocacy, outlined a number naturalization case studies across Canada which were meant to demonstrate innovative ways to protect natural heritage in the urban context. In almost all instances, it was noted that in order for programs like these to work, public perception of the value of naturalized landscapes was the biggest obstacle to overcome, and the need for public education was a critical component of any initiative (Ingram, 2001).

IGNORING THE ISSUES

There has been a relative lack of information and interest regarding the full impact of development patterns on the environment. Although the economic costs of sprawl have been well documented (Heimlich and Anderson, 2001; Bank of America, 1995), relatively little attention has been given to research on the quantitative impacts of growth on natural resources and agricultural lands (Vogt and Marans, 2003).

Planning departments, in many cases, also continue to overlook some of the basic problems with development patterns. In a recent study, Planning Directors across Canada were asked to outline their greatest concerns. Environmental issues, as a distinct item, were not considered pressing. Furthermore, of the 67 planning directors that saw themselves as having growth-related problems, less than half had plans or initiatives to deal with them (Skaburskis and Brunner, 1999).

Another interesting finding from this study was that, in general, the planning departments supported growth. This support, however, diminished when the growth was seen to bring about sprawl and problems in housing affordability. It also diminished when the growth was taking the form of medium and higher density housing - the kind of housing that reduces sprawl and creates lower prices (Skaburskis and Brunner, 1999). This contradiction indicates that a thoughtful consideration of the issues and tradeoffs of development patterns is not necessarily taking place.

CONSERVATION DEVELOPMENT PLANNING

WHAT IS CONSERVATION DEVELOPMENT?

Conservation development planning is uses the ecological and cultural context of the land to inform the design of a development in contrast to conventional platting. This approach gives each conservation development a form that is unique to its location. It is generally applied to rural, exurban, or suburban residential subdivisions, although there are limited uses for it in a more urban setting. It provides one means to address many of the problems outlined in the previous sections, and draws on the principles of smart growth, sustainable development, and ecosystem-based planning.

In conventionally designed subdivisions, land is typically divided into lots and streets with little or no regard for natural features. Open space is generally kept to minimum required standards (e.g. unbuildable areas such as wetlands, ravines, floodplains and steep slopes). In contrast, conservation developments create lots based on the natural and cultural heritage features of the land. The actual lot sizes are reduced (with the same density) and houses are usually clustered in order to provide a much larger area of open space (typically 40%+) (Arendt, 1996; Minnesota Land Trust, 2000).

Conservation development borrows from the idea of cluster and open space designs which originated in the early 1960's, and Ian McHarg's “design with nature” philosophy, also from that era. In the early 1980's Randall

Arendt, a British-trained Planner with The Center for Rural Massachusetts, pulled these ideas together in his book *'Dealing with Change in the Connecticut River Valley: A Design Manual for Conservation and Development'*. Since then, these ideas have been further laid out and refined in books such as *'Conservation Design for Subdivisions: A Practical Guide for Creating Open Space Networks'* (Arendt, 1996) and *'Rural by Design: Maintaining Small Town Character'* (Arendt, 1993).

THE CONSERVATION DEVELOPMENT PROCESS

Conservation development planning may be applied individually on a site specific level or, ideally, on a larger scale such as the region or municipality. In Ontario, conservation developments have only been implemented at the site level. The province of New Brunswick, however, is currently investigating the possibility for creating a province-wide framework that could provide benefits beyond the local scale. Arendt has published a number of papers and books regarding the conservation development process and the information provided in this section has been compiled from these sources, as well as through personal communication with John Paul Warren, Executive Director of the Conservation Development Alliance of Ontario (Arendt, 2004, 1999, 1997a, 1997b, 1996, 1992; Warren, 2003).

In conventionally designed subdivisions, land is typically divided into lots and streets with little or no regard to natural features. Open space is generally kept to minimum standards required (eg wetlands, ravines, floodplains, steep slopes, etc). In contrast, conservation developments create lots based on the natural and cultural heritage features of the land. The actual lot sizes are reduced (with no reduction in density) and houses are clustered in order to provide a much larger area of commonly held open space (typically 50%+) (Arendt, 1996). The process should ideally begin with a region/community determining a framework for the green/open spaces, natural/cultural features, and landscapes they wish to preserve. Where development occurs within these areas, conservation development can be used to guide subdivision layouts. Very simply, the process involves determining the primary conservation areas (eg flood plains, ravines, etc.) and the secondary conservation areas (features that have been identified as those to preserve such as agricultural lands, an historical feature, woodlot, water recharge area, etc.). House lots are then clustered together in order to avoid the primary and secondary conservation areas as much as possible. The density remains the same as the individual house lots are condensed and this space is then "transferred" to create the open space area.

A number of options are available for ownership of this space including: private ownership; a homeowners' association; a land trust; municipal or other public agency ownership; a combination of any of the above.

POTENTIAL BENEFITS OF CONSERVATION DEVELOPMENT

There are a number of environmental, social, and economic benefits that may be potentially realized through the use of conservation development planning. These include:

- Stormwater Management and Water Protection
- Buffers and Protection of Environmentally Sensitive Features
- Role as a Connector
- Agricultural Preservation and Buffering
- Potential to Create Partnerships Between Developers and Conservationists
- Option to Large Lot Estate Development
- Economic Benefits
 - Cost Savings Benefits
 - Greater Appreciation of Home Values
- Reconnection with Nature and Development of a Land Ethic

LIMITATIONS OF CONSERVATION DEVELOPMENT

While conservation developments possess a number of positive benefits, there are certain limitations to their use and, in some respects, demonstrate qualities which may be potentially detrimental from both an environmental and societal standpoint.

- The appearance of a “green” development only, with little ecological value
- Incompatible With Large Scale Conservation or Agricultural Preserves
- Rethinking of private and public open space
- Potentially Limited Use in Southern Ontario due to market and existing building practices

In summary, conservation development provides one possible means for addressing the issues of sprawl, however, it is not an answer in itself. Tools such as urban boundaries, better use of existing infrastructure and infill projects, conservation easements, land acquisition programs, purchase/transfer of development rights, stewardship programs and, probably most importantly, educational programs for the public, industry and government must also be considered.

LANDON BAY EAST CASE STUDY

SITE LOCATION AND DETAILS

Landon Bay East is a residential development located just northeast of Gananoque, off the Thousand Islands Parkway. It is located within the Township of Leeds and the Thousand Islands, formerly the Township of the Front of Leeds and Lansdowne, a rural Township that encompasses a total of 1,078,641 ha and has a population of approximately 8,720 year round residents (J.L. Richards & Associates Ltd., 2002).

The development is set against a backdrop of some of the most environmentally significant landscape and species in eastern Ontario (Brennan, 1998; Morantz and Barbour, 2001). It is located adjacent to the Mount Fitzsimmons Area of Natural and Scientific Interest on Landon Bay East, an inlet to the North of the St. Lawrence River. It is also located on the south-west tip of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) designated Thousand Islands-Frontenac Arch Biosphere Reserve. With over 400 Biosphere Reserves world wide, this is one of only three in Ontario and twelve in Canada. The Biosphere Reserve boundaries follow a rough natural triangle between Brockville, Gananoque, and Westport, Ontario and extend into South Frontenac Township around the borders of Frontenac Provincial Park (Smith, 2003).

Landon Bay East covers 160 acres, consisting of a 65-acre nature preserve, a tennis court, and a total of 28 lots ranging from 1.6 acres to 13.5 acres, priced from \$76,000 to \$365,000. To date, 18 properties have been sold but not all of these have completed building their homes. The lots are fully serviced and suggestions are made for the most appropriate building locations, however, it is up to the purchaser to make arrangements for house design and construction. Approximately 41% of the site is preserved as common open space, although restrictions on the private lots increase the total effective open space.

THE DEVELOPMENT PROCESS

In 1987, Wild Apple Properties, comprised of three generations of Johnson's family, was formed to develop Landon Bay East. In 1987, concept plans were prepared. The zoning for the area permitted one house per acre. Town council approved the concept in principle in 1989 and other commenting agencies were generally favourable to the plan with no major concerns stated.

In 1990, a formal review of the plan was circulated and objections were made by the Ministry of Natural Resources, the Cataraqui Conservation Authority, and the St. Lawrence Parks Commission, based on the Ministry's realization that part of the property was adjacent to the Mount Fitzsimmons Area of Natural and Scientific Interest (ANSI). The Ministry had identified the ANSI in 1987, however, neither the Township nor the landowners had been notified of the designation previously. This led to a series of negotiations, in particular with the Ministry, over the following four years to refine the plan to develop a mutually agreeable situation. During these refinements, a total of 65 acres, or 47% of the parcel, was set aside to be protected which included the northern portion of the lands from the east shore of Landon Bay to the eastern boundary, as well as all the wetlands and all shorelines.

In 1994 both the Ministry and the Township provided their approval of the draft plan. In a letter from the Ministry, the project planner Brian Hollingsworth noted, "we would like to formally acknowledge the cooperation we have received from the developer, Brad Johnson, and commend his efforts to incorporate environmentally sensitive development constraints into this subdivision proposal" (Hollingsworth, 1994). The opening launch party for the site was held in September 1997.

LONDON BAY EAST – THE FINAL PRODUCT

Seven years after the initial opening, approximately 18 of the 28 lots at Landon Bay East have been sold. While not yet built out, there is enough of a history at this location to observe the results of the process.

STRUCTURE OF OPEN SPACE MANAGEMENT AND REGULATIONS

A number of tools were implemented in order to ensure the integrity of both the 65-acre open space preserve and the individual lots within the subdivision. A homeowners' association consisting of all residents of Landon Bay East was made a part of the subdivision structure, with the responsibility for managing the open space based on the Management Plan prepared in concert with the Ministry of Natural Resources. Membership is mandatory upon purchase of a property within the subdivision. A conservation easement in favour of the St. Lawrence Parks Commission was also placed on the open space preserve, with the ultimate responsibility of enforcement falling to this agency. When asked whether homeowners could overturn the restrictions that have been put in place, Johnson stated, "they can't. It's a registered subdivision. The roads are municipally owned. Any changes would be exceedingly difficult if not impossible, not only because of the municipal restrictions but because the residents are part of an association in which a majority rules (Johnson, 2004).

To protect the integrity of individual lots, purchasers must agree to conditions of a restricted covenant which are highly prescriptive and designed to be enforced in perpetuity, regardless of whether a house is sold (runs with the land).

ECOLOGICAL FUNCTIONING AND MONITORING

Wildlife corridors and plant habitats to be protected were identified by the Ministry of Natural Resources, resulting in approximately 45% of the site being designated for protection. Known wildlife corridors between lots were left as open space, and were preserved along all shoreline areas, connecting the site to the Mount Fitzsimmons area. Vegetated swales were provided between key properties to provide wildlife access to and from the wetlands, and although the previous use of this area by the campground had caused disturbances to the pond habitat, corridors were left to allow movement between the wetland and the pond to re-establish its viability. Access to the wetland and property lines were set back and there is no direct access to the water from any of the lots (Johnson, 1994).

Although there were a number of studies, including a management plan, there appears to be little follow up in regards to how this development is actually performing ecologically. As holder of the conservation easement, the St. Lawrence Parks Commission is responsible for monitoring, however, as noted by Don Ross of the Canadian Thousand Islands Heritage Conservancy (CTIHC), the resources to carry this out are limited.

Most recently, the CTIHC has been instrumental in securing a number of properties surrounding Landon Bay East. Negotiations with the Nature Conservancy of Canada led to their agreement to purchase a significant piece of property on the other side of the bay and to hand it over to Parks Canada. The St. Lawrence Parks Commission was also convinced to sell their holdings in the north Parkway portion of the Thousand Islands to Parks Canada, and the CTIHC is currently working with landowners in the area to increase the number of protected properties in the Landon Bay area (Ross, 2004). It is hoped that with this increased attention, the St. Lawrence Parks Commission will get assistance in the near future from CTIHC and Parks Canada for monitoring programs. While there appears to be little direct information regarding ecological impacts from the development, Ross (2004) noted, "there has of course been a considerable loss of habitat and drainage interruption. A housing development in an ANSI could not of course enhance the ecological values or functions in any way, and there is no way this could be construed as sustainable development...The best thing one could say is that it could have been worse. The township would readily have given permission - and still would - for a much more intensive development".

MARKETING AND ECONOMIC ISSUES

In his professional career, Brad Johnson worked with developers and was involved in the design and regulatory process, although he was not a developer, per se, himself. While this background no doubt helped get this project off the ground, his relative lack of development experience may have impacted the overall costs and effective marketing of the project. Ontario developers tend to be more conservative than their counterparts in the United States, for a number of regulatory, financial, and structural reasons. This creates conditions that discourage innovation in the industry, often leaving more unique projects to smaller players.

From an economic standpoint, Landon Bay East has been somewhat sluggish on its return. Although the land was owned outright, the project self-financed, and Johnson, being a landscape architect, was able to provide many of the technical services in the development of the property himself, the project also incurred significant costs. In addition to the time put into the project, studies were required for stormwater, hydrogeology, and archaeology, among others. The estimate for the cost of municipal services alone, which were required to be paid for by the developer totaled \$628,700 (1996 dollars).

In 1995, the land at Landon Bay East had an assessed market value of \$130,000. With 28 lots for sale and prices ranging from \$78,000 to \$360,000, there was potential for a profit, however, income is only derived when a property is sold. To date, ten of the properties still remain for sale seven years after opening. Initially, the properties were listed with a local real estate broker which was not necessarily the best option for a unique development such as this. Without an understanding of the type of market this type of community would appeal to, a lack of experience in development and new construction, and confining the marketing to a local network, sales got off to a slow start.

COMMUNITY AND SOCIAL ISSUES

Landon Bay East has so far primarily attracted empty nesters and professionals without children, given its location. Despite its relatively disperse design, a cohesive sense of community has taken root. Residents "patrol" the area and take pride in their location, and activities such as dog walking, hiking along trails, and the tennis courts provide opportunities for social interaction. This sense of community and ownership has also been observed in other conservation developments. In a recent study carried out on attitudes of residents who lived in these types of communities, the large majority found the layout encouraged social interaction, particularly due to the various stewardship and organizational activities around the management of the open space (Austin, 2004).

DISCUSSION AND ANALYSIS

How does Landon Bay East measure up as an example of conservation development and as an alternative to conventional development? Although the scope of this paper includes neither the development of an indicator framework nor the gathering of quantitative data, a discussion of Landon Bay East's relative merits and shortcomings will be reviewed. The criteria this evaluation is based on generally relates back to the potential benefits and potential shortcomings of conservation development, as outlined earlier .

HOW DOES LANDON BAY EAST COMPARE? POSITIVE TRAITS

USE OF LANDSCAPE ECOLOGY TO INFORM DESIGN

Even though zoning would have permitted greater densities, the lot size was not minimized. Lots were defined as much as possible by fitting the natural landscape units. For example, a valley feature became a single lot. This led to a wide range of lot sizes, from 1.64 acres to 13.46 acres and a pattern that was more disperse than a clustered form. Given the topography of the land, this was a more appropriate method, as there are no single areas within the site large enough to accommodate a grouping of homes. The layout of the roads was also fitted as closely as possible to the topography, but it was noted that they still seemed out of place, dominating the landscape. Further investigation into this revealed that because they are municipally serviced, they are required to conform to normal subdivision road standards in terms of dimensions, horizontal, and vertical alignments.

The framework that Wild Apple Properties used to lay out this development provides other benefits in addition to better conserving the site's ecological features. The process provides a template to follow, and although there were difficulties, it proves that it is possible to take the concept of ecological design to a built form. In addition, it creates an alternative prototype to the highly manicured yard, promoting a natural and naturalized landscape celebrating the existing features unique to that site.

USE AS A CONNECTOR AND BUFFER

The Landon Bay East property sits adjacent to the Mount Fitzimmons Area of Natural and Scientific Interest, with Landon Bay in between. In addition, it is a key area within the Thousand Islands Frontenac Arch Biosphere Reserve and the proposed "A2A" (Adirondack to Algonquin) natural heritage framework. There are currently tensions within this area between the current zoning which allows both commercial and residential development and the ongoing efforts to protect as much of this area as possible within an ecological reserve. The property on which Landon Bay East resides is caught between these and, by using a conservation development strategy, has negotiated a compromise between the two.

POSITIVE ROLE MODEL FOR COLLABORATION

One of the most positive aspects about the Landon Bay East development is its exemplary process of negotiation with various government and environmental stakeholders. Traditionally, the development process is highly adversarial and its results are often unsatisfactory for all involved. Unsolicited comments from both the St. Lawrence Parks Commission and the Ministry of Natural Resources who were involved were highly positive (Brennan, 1998) as noted earlier in an excerpt from the Ministry commending Brad Johnson for his willingness to work with the various stakeholders. Providing a positive role model for multi-stakeholder involvement to work towards goals that incorporate environmental concerns is critical in working towards producing more sustainable development.

ALTERNATIVE TO LARGE LOT ESTATE DEVELOPMENT

Another aspect in favour of Landon Bay East is that it provides a vast improvement over the estate lot developments prevalent in the area. The sensitivity of the development in Landon Bay East in working with the constraints and opportunities that were physically present, and preserving most of the natural features on the site, is in sharp contrast to the "Brecken Ridges" subdivision a few kilometers to the west. Brecken Ridges is a conventional estate subdivision, consisting of large lots with expanses of lawn interspersed by the odd small tree. From both an aesthetic and ecological perspective, it is distinctly different than Landon Bay East.

Furthermore, although the process may not have been congenial at all times, the general spirit of collaboration that characterized the Landon Bay development appears differ from Brecken Ridge. By way of example, it was noted that a request made by the St. Lawrence Parks Commission for a treed buffer between the development and the Thousand Islands Parkway was ignored by the developer. With no legislative authority, the agency was unable to enforce this requirement.

HOW DOES LANDON BAY EAST COMPARE? NEGATIVE TRAITS

Although there are a number of positive features associated with Landon Bay East, it also demonstrates some negative ones. Some of these are inherent to conservation development or are the result of general societal attitudes, while others are specific to the development itself.

AESTHETICS VS ECOLOGY?

For Landon Bay East, the term "watermelon eco-city" may be one that is an appropriate moniker. The analogy is that the development is green on the outside only and refers to developments that are concerned exclusively with issues of livability. Goals of preserving and enhancing the urban environment so that it is greener, increasing the amount and quality of public open space, preserving agricultural land, identifying environmentally sensitive areas, and creating environmental amenities for the enjoyment of the public, although admirable, may be considered more superficial concepts when looking at creating truly sustainable communities (Moffatt, 2001).

This focus on the aesthetic qualities of Landon Bay East is prevalent, as is clear from many of the conditions of the restrictive covenants. In fact, the protective covenants begin with the objective, "to preserve the scenic beauty and natural qualities of the property for its owners and residents" (Johnson, 2003).

PUBLIC SPACE AND ELITE LANDSCAPES

The concept of a private community which discourages interaction with the larger whole is prominent. The marketing literature for the property refers to “our private park” and “our nature preserve” and stresses the fact that these areas are privately owned. The property is geared towards an upper-end market. The strong encouragement towards architecturally designed custom homes, the price of the land and the prohibition of anything but single-family dwellings (e.g. no multi-unit dwellings or commercial units) ensures a fairly exclusive clientele. Landon Bay East could be considered a classic example of the aestheticization of class relations based on its combination of exclusivity intertwined with the apparently non-controversial aesthetic of maintaining a wilderness preserve, such that “the seemingly innocent pleasure in the aesthetic appreciation of landscapes and the desire to protect nature can act as a subtle but highly effective mechanism of social exclusion and the reaffirmation of the elite class identities” (Duncan and Duncan, 2001: 198) .

This situation at Landon Bay East was observed by David Bull (2004), “socially, it may appear exclusive and represent limited availability - which may be the price for conservation oriented development in hard to find woodlot settings along or near the Thousand Islands”. While issues of social equity are certainly the case, not just for Landon Bay East but for other conservation developments due to their price range, Beatley points out, “...actions that protect the environment, while sometimes undermining, in the short term, social equity goals – for example, by raising the cost of housing – are designed to respond to other principles of justice – for instance, obligations to protect the interests of future generations or other forms of life on earth” (1989: 13).

Perfect solutions do not generally exist for most problems, and certainly not for problems as complex as the negotiation between development and the natural environment. Landon Bay East performs a balancing act between this tension, and in evaluating whether it can be considered a success (or not) depends on who is evaluating it. One of the most interesting aspects of this case study was to observe first hand the widely varying perceptions of landscape and how these feed in to evaluating what is “successful”.

From a conventional developer’s viewpoint, such as Peggy Adair, the land as a means to derive income is seen as its primary purpose. In her opinion, Landon Bay East could have been more successful had it been marketed more effectively and the size of the homes increased to create a more exclusive environment. Brad Johnson, the developer of the property, although not seeing the land entirely as an economic resource, viewed the property as something that should be put to productive use. Leaving the land without an identified purpose was not an option. Although economic profit was not maximized, Landon Bay East is successful in this instance based on the creation of a “purposeful” landscape. Peter Hannah, the Township Planner, takes a pragmatic approach to the land, basing success on the effective negotiation between the ideal and the realistic, using the framework of rules and regulations set by the Planning system. His comments on Landon Bay East were that given what the rules allowed, the development could have been far worse and that this demonstrated an example of restraint and consideration on the developer’s part.

David Bull, Executive Director of the Thousand Islands Residents’ Association views the landscape as a means to maintain a particular way of life. The land is viewed for its ability to create a certain quality of life through maintaining the aesthetic of the environment and conserving its natural beauty. The avoidance of encroachments is of primary importance and in this respect, Landon Bay East is generally supported by this group, given the development’s attention to embedding itself physically into the landscape. Don Ross, with the Canadian Thousand Islands Heritage Conservancy, appears to be alone in this group of supporting the intrinsic value of the land rather than one solely anthropocentric-based. His view of the landscape appears based more on the traditional conservationist, with a distinction made between people and nature. Although there is an acknowledgement that more damaging forms of development could have occurred, Landon Bay East is viewed primarily as an invasion on an otherwise unspoiled property.

Conservation development and Landon Bay East offer something to each of these views, but they do not fully support any of these singular objectives for the land. While Johnson has made an honest attempt to create a development that uses a far more sensitive approach to the landscape, it would be inappropriate to think of this as an example of sustainable development. Where it succeeds is in fostering a dialogue between these

competing views of the land and attempting to provide better solutions for each of these interests, than those offered by conventional development.

ADDRESSING BARRIERS AND MAKING CHANGES

Although the “Growing Greener” program advocated by Randall Arendt provides some very specific actions that can be incorporated to advance conservation development, it is only one tool for addressing the many issues that face us regarding the problems with conventional residential development. Through the research carried out for this paper, it is obvious that changes to the existing regulatory and financial frameworks, dominant cultural attitudes of both the public and developers, as well as gaps in our understanding of ecological processes must be addressed before more environmentally sensitive development becomes standard practice.

REGULATION REFORM AND ACCESSIBILITY TO NEW OPTIONS

GREATER USE OF INNOVATIVE ZONING AND REGULATORY TOOLS

In a recent survey of Canadian municipal planning departments, it was found that most municipalities use only a handful of conventional growth management tools (Skaburskis and Brunner, 1999). A number of reasons may be cited for this: potential negative impacts of employing new techniques; a lack of understanding or knowledge of innovative tools; the unwillingness of politicians to endorse potentially contentious programs; and a lack of funding and technical resources.

As a result of this lack of ability or willingness for innovation, the very problems municipalities are trying to avoid become supported by planning regulations. The “Growing Greener” program outlined by Arendt and described earlier in the paper provides one set of tools that has been found successful in a number of communities, and contains few, if any, characteristics that would likely raise much opposition. Sample ordinances and mapping techniques for implementing such a program are provided through a number of sources, including works by Arendt and the Northeast Illinois Planning Commission.

PERFORMANCE-BASED ZONING

Highly restrictive and often antiquated building codes, engineering and zoning regulations, and by-laws can be a significant barrier to conservation and other types of more environmentally sensitive development. Wide streets, large lots, deep setbacks, outdated stormwater management techniques, and the prohibition of mixed land uses often serve to thwart attempts at creating non-conventional residential developments (O’Neill, 2002). Municipal approvals related to alternative developments, because they are novel, are often subject to intense and lengthy review by municipal staff. New by-laws have to be drafted and variances put in place to accommodate the alternative development form. Rather than traditional zoning and highly prescriptive regulations, performance-based zoning and development permitting offer a means that would better support conservation development and address environmental concerns.

Performance zoning is a method that permits controlled development while also being sensitive to the landscape. It tries to regulate the impacts of land uses, rather than the uses themselves, by outlining general goals for developers that they can meet in different ways. Landowners are permitted a wide variety of uses, so long as they meet certain numeric standards such as a certain ratio of impervious surfaces, a certain density, a certain amount of open space, or certain noise level standards (Ohm, 2002). Implementation of such an approach to zoning at the local level would have to be carefully monitored by provincial authorities to ensure that municipalities are enforcing the environmental criteria and that the burden for ensuring compatible development is not falling unduly on local residents (Tomalty and Paul, 1999).

COORDINATION OF PUBLIC AND NON-GOVERNMENTAL RESOURCES

Land development is a complex process, with a great number of overlapping jurisdictions. This often results in a lack of coordination, leading to ineffective communications and use of resources. Creating a more cohesive and collaborative means to address development and make better connections between the resources of governmental, non-profit, and citizen-based groups is needed. In addition to aiding in communication, better coordination would allow for more streamlined processes and fewer duplications in effort.

For example, in the United States, the Urban Land Institute, an education and research-based institute supported primarily by the land development industry, works with a number of environmental agencies such as The Conservation Fund and The Trust for Public Land, both well-respected national land conservation organizations. The National Association of Home Builders is working with the National Arbor Day Foundation to educate builders, citizens and public officials on tree protection in the development process. Breaking down the barriers between similar organizations in Ontario will likely be needed before significant progress is made.

PUBLIC EDUCATION AND STEWARDSHIP

More than any other sector, the general public is instrumental in moving towards a more sensitive approach to development. As Jill Grant points out, “many of the ‘planning problems’ of contemporary Canadian cities result from significant life-style choices that Canadians have made; they cannot be ‘solved’ without dramatic cultural transformation” (1999: 17). Ultimately, the success of biodiversity conservation depends on broad-based public support.. As Nassauer (1997) suggests, we need to develop new perceptions of landscapes that allow people to see healthy wild ecosystems as beautiful. Conservation developments, if encouraged to retain their natural features, provide examples of an alternative aesthetic that can contribute to shifting the dominant cultural conception of what constitutes an attractive landscape.

A number of opportunities exist to integrate public education and stewardship opportunities within conservation developments. For example, the Santa Lucia Preserve a residential development in Carmel Valley, California has established a conservancy to manage the land and provide opportunities for environmental education on site. This is funded through an endowment from a dedicated portion of the sale price of each residential parcel (McMahon and Pawlukiewicz, 2003). Lake Margaret Estates in St. Thomas, Ontario incorporates a stewardship program with local high school environmental education courses.

DEVELOPMENT INDUSTRY EDUCATION AND REFORM

Although there is a market, and a potentially profitable one, for incorporating conservation design into residential developments, there is currently little understanding or research on the part of the real estate and development industry in regards to this. One of the problems noted in the marketing of Landon Bay East was the lack of knowledge on the part of the local realtor community in promoting this kind of development. This does not appear to be an isolated situation. Lee R. Rayburn, of the Community of Civano in Tucson, Arizona said, “one of the major barriers to expanding the market for conservation development is the realtor community, which does not understand or accept the viability of this type of development” (quoted in McMahon and Pawlukiewicz, 2003: 3).

A common refrain from the development community is that they are simply meeting the demands of the market place and are only building what consumers are asking for. However, it is interesting to note that in a study carried out in Calgary, Alberta on developer attitudes towards sustainable development, it was found that research and development play a minor role in the development of housing and residential communities. It was suggested that the land development and house building industries typically undertake less research and development for innovation than is customarily expected in other sectors (Shivji, 1998). The notion that the development community is not particularly open to innovation was highlighted by Brad Johnson’s response, when asked if he had networked with other developers regarding Landon Bay East, “No. I knew that other developers would think (know) we were crazy” (Johnson, 2004).

Bringing the development community on board through education regarding issues, and providing built examples of successful models of conservation development is essential, if mainstream developers are to become involved. Currently, green development accounts for only 2.5% of all development in the United States and will likely remain a small percentage unless mainstream builders are brought into the field. The challenge is how to move green development out of the “innovation ghetto” (McMahon and Pawlukiewicz, 2003). This is particularly important in Ontario where the industry is structured more as an oligarchy, with relatively few major players. To date, generally only smaller developers such as Wild Apple Properties (Landon Bay East) and Doug Tarry Homes (Lake Margaret Estates) have risked working outside the standard development pattern, a situation that will need to change if significant changes are to happen.

LAND TRUSTS AND CONSERVATION EASEMENTS

Land Trusts may play a very important role in supporting and managing conservation developments. As discussed earlier, one of the ways that a conservation development's open space may be owned or managed is through a land trust. While they are becoming an increasingly useful tool in supporting land conservation, there are a number of barriers which impede the greater use of land trusts in Ontario. In order to encourage their use and to make them a more attractive option to incorporate within the land development process, revisions to tax laws, access to securement funding, and the need to be more inclusive must be addressed.

MONITORING PROGRAMS

Although growth management techniques have been in use for several decades, the apparent costs of sprawl are high, and there is a great deal of public concern regarding this topic. Yet there has been little research done on evaluating the effects of various policy instruments and programs.

Developing a means to assess the relative value of various growth management and land use programs and policies is needed in order to determine their effectiveness. Monitoring programs also further the likelihood that the policies will be effective and therefore more liable to be implemented. Creating innovative programs and tools is only the first step towards improving any situation. Without a means to enforce their use and a way to monitor results, its value becomes worth little more than the paper it is written on.

Greater emphasis on physical site monitoring is also needed. One of the unfortunate aspects of the Landon Bay East case study was the inability to obtain information on the existence of such programs, however, it is highly likely that this is because none exist. Attempts to contact organizations that would be expected to be involved in monitoring resulted in either a negative response (they were not carrying out any monitoring) or a refusal to respond. Comments from individuals interviewed indicated that there was very little funding to carry out ongoing monitoring programs, especially in light of the ongoing budget cutbacks and the downloading of services.

CONCLUSION

As conventional development creates problems that are becoming increasingly difficult to ignore, we are faced with the need to look at alternative ways to approach the residential development process. Conservation development offers such a means. It provides a more comprehensive method for structuring natural heritage systems on a regional scale and allows for a rethinking of how humans relate to the landscape. While it does not necessarily encompass the full range of features that would be considered "sustainable", it sets the framework for using a more sensitive approach to development, where collaboration between traditionally adversarial groups may be bridged. While examples of individual conservation developments are slowly accumulating in Ontario, the implementation of region-side frameworks should be considered, particularly in rapidly expanding areas such as the Greater Toronto Area.

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