

The Natural City

By Vic Derman

3 Lenses to Shape our Region's Future:

The RGS

Climate Change

Quality Of Life and Place

Without doubt, Saanich and our region face a future where we must "do things differently" to succeed. Past practices have produced a myriad of outcomes such as loss of open space, environmental degradation and choking congestion that are unsustainable and inconsistent with citizen's hopes and expectations. The Regional Growth Strategy(RGS), recognizes this reality and contains numerous recommendations for a more sustainable future. Collectively, they attempt to preserve:

"the ability of future generations to meet their needs, ensure the ongoing health of the natural processes that sustain life, and support the social and economic arrangements that create prosperity and well being" (RGS 2003)

While the RGS is a comprehensive document, it is also very much a high level overview. Perhaps for this reason, its success in shaping our choices has been limited. That must change! The growth study's recommendations are sound. We need to treat them as a "lens" to our future. For all decisions, we must ask:

"IS THIS CONSISTENT WITH THE FUTURE THE RGS ENVISIONS?"

Despite its emphasis on a sustainable future, the RGS was not created in an "environment of climate change". This "new" issue, the most critical problem of our time, is arguably the greatest threat humanity has faced. Its potential consequences range from severe to apocalyptic and add a particularly urgent reason to rethink our direction. Meeting the climate change challenge will require a massive effort. Senior governments must lead but every individual and community will have to contribute. The urgency of climate change provides us a second "lens" to the future. Invariably we must ask:

"DOES THIS HELP TO MEET THE CHALLENGE CLIMATE CHANGE PRESENTS?"

The RGS is also rather silent about our economic future. To succeed, our economy will need ongoing inputs of wealth, skill and talent. Unfortunately, insuring these investments is anything but certain. Like it or not, we face increasing competition from cities across the planet. Those with wealth, skill and talent are in high demand. It's easy for them to pick and choose between competitors. So, how do we "win"? How do we insure that our region remains a "place of choice" for the investments we need?

We do not possess an abundance of advantages. We're not particularly close to markets and we certainly don't have a transportation edge. Nor do we offer a low cost environment and few would like the "race to the bottom" needed to create one. We do have some advantages in the education and technology sectors, but they're not enough to guarantee success. Fortunately, we have one singular advantage. Our unsurpassed natural setting and attractive built environment create a "Quality of Place" and "Quality of Life" envied by most. That is our economic ace! Hold on to it, build on it, and we guarantee our economic future! Discard it and our future becomes far less certain. Quality of Life and Place are the third "lens" to the future. Without fail, we should ask:

"WILL THIS ACTION MAINTAIN AND ENHANCE THE QUALITY OF THIS PLACE?"

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Collectively, the three lenses bring our future into focus. The picture they define is one of environmental, social and economic sustainability. It portrays a new approach that cannot be accomplished with tinkering and incremental change. Instead, bold and visionary action will be needed. Why not set out to build:

THE WORLD'S MOST ATTRACTIVE, LIVABLE, EQUITABLE AND, ABOVE ALL ELSE, SUSTAINABLE MEDIUM SIZED URBAN AREA PERIOD!

Call the project "**THE NATURAL CITY**" to reflect the dramatic shift in direction it demands. Accomplishing it will not be easy but the rewards will be worth the effort. Getting even close to The Natural City would: fulfill the vision of the RGS, help to meet the challenge of climate change and all but guarantee our future economic success. Can we afford to do anything else?

Principles of The Natural City

- **THE NATURAL CITY IS GOAL BASED** - The primary goal is to build the world's most attractive, livable, equitable and sustainable medium sized urban area.
- **THROUGH THE "LENSES"** - The three lenses and the questions they generate must become central to all decisions and choices that shape our future.
- **DESIGNING WITH NATURE** - Integration with nature and minimal interference with the natural environment are at the core of The Natural City. The urban area must exist harmoniously with the surrounding environment. Key systems should mimic natural processes and integrate with them to the highest degree possible. Furthermore, the urban area should minimize both "withdrawal of resources" and production of "waste" materials.
- **LOCAL AND GLOBAL CONTEXT** - The Natural City aims to address local issues while contributing to the solution of larger global issues.
- **AN INTEGRATED APPROACH** - Planning in isolation, taking a "silo approach" or promoting "single issue solutions" is unacceptable. Instead, integrated planning that seeks synergies between systems must become the norm.
- **LARGE AREA PLANNING** - Benefits can be gained from large area planning. In general, the larger the planning area involved the better.
- **BUILDING ON OUR ASSETS** - Enhancing "Quality of Life" and "Quality of Place" are key goals of The Natural City that are essential to future economic development
- **IMPLEMENTATION PLANS** - Accomplishing The Natural City requires specific implementation plans based on the three lenses and the framework of goals, principles and attributes that they provide.
- **BUILDING IN SOCIAL EQUITY** - Social equity is best accomplished when it is a core part of both a long term vision and plans stemming from that vision.
- **CLIMATE OF COMMITMENT** - Accomplishing The Natural City will require vision, ambitious long term planning, leadership and political courage.

***Why Not
Build:***

**The World's
Most
Attractive,
Livable and,
above all
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Medium
Sized
Urban Area
..... Period!**

***Call It:
THE
NATURAL
CITY***

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Attributes of The Natural City

The attributes below describe key features of "The Natural City". The list is not exhaustive. A complete description of Natural City attributes would require a much longer document. Also, attributes are grouped under headings for convenience. This "convention" should not detract from the fundamental principle of visionary, integrated long term planning. In a similar vein, the attributes listed do not supersede the role of the "three lenses" in guiding decisions about the future of our region.

LAND USE AND TRANSPORTATION - The synergies between land use and transportation make it virtually impossible to consider them under separate headings. On the one hand, sustainable transportation depends on appropriate land use patterns but it is equally true that putting the "right" transportation infrastructure in place can be an important tool in encouraging and implementing desired land use choices. The advantages this synergy offers make it a particularly attractive planning tool. Attributes of sustainable land use and transportation include:

- Future land use must avoid decentralized, "sprawl" patterns in favour of a more centralized, denser footprint.
- A regional transportation vision built around a dedicated right of way network involving technology such as Light Rail Transit(LRT) must be established. Such a vision would encourage desired land use patterns and insure future mobility. Without it we face choking congestion destructive to our quality of life and place.
- Placing denser development in appropriate locations is an important element of sustainability. "Green" developments placed in the wrong location are not necessarily sustainable. Thus, as in the real estate industry, "**location, location, location**" should become the mantra.
- Denser developments and other major "trip generators" should be connected by the dedicated right of way network. If denser developments must be placed in sub-optimal locations, their connection by the network becomes even more critical.
- New denser "complete" communities should be designed to maximize internal activity thus promoting cycling and walking to local destinations as preferred modes while minimizing the need for longer trips.
- The design and funding of future transportation systems should demonstrate a commitment to pedestrian travel, cycling and transit, the preferred modes identified under the RGS. Particular attention should be paid to both the quantity and quality of pedestrian and cycling infrastructure.
- Finally, from a social equity perspective, design goals should insure that no citizen is unduly disadvantaged because they either cannot afford a car or choose not to own one.

COMMUNITY DESIGN - Without doubt, denser communities will be the way of our future. Planning for these communities will be critical. It is easy to create "dumb density" by simply piling more units into a given area. The process of creating "complete" communities that are attractive, sustainable and livable is much more difficult and will require considerable planning and forethought. Attributes of complete communities include:

- New, "complete", denser communities should maximize internal activity. This can be accomplished by providing residents with local destinations to meet as many of their needs as possible. Employment, local retail, recreation, cultural activities, services, greenspace and other public spaces must be early design elements.
- Internal mobility should also be a priority. Special attention should be paid to the quality of pedestrian and cycling infrastructure.
- Finally, denser communities should aim to be attractive and competitive with single family neighbourhoods. To meet this goal, new communities must meet high standards for quality of life. An extensive amenity

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package for residents will be essential. Communities might, for example, be built around a hierarchy of public open spaces and greenspaces with a design goal that every resident's door is within 15 seconds of an attractive public space in which to relax, within 30 seconds of a larger space providing at least limited recreational opportunities and within 1 or 2 minutes of a still larger space where activities such as field sports could take place. As one element of the amenity plan, this hierarchy would go a long way to replacing the backyards that are a particularly desirable aspect of single family life.

ADDITIONAL SUSTAINABILITY FEATURES - Appropriate land use, transportation and community design are central to a sustainable community. To be truly sustainable, however, The Natural City must address a much broader mix. The relationship of developed areas with the surrounding natural environment is an important aspect of this broader mix. To address this concern, The Natural City must reach beyond individual projects and green design standards to the broader goal of "designing with nature". In addition, the larger global environment, energy use, waste products, economic viability and social equity must be part of the mix. Sustainable elements of the Natural City include:

- New developments must be required to follow compact settlement patterns that preserve remaining natural and rural areas around the developed core.
- Preservation of remnant environmental features and re-generation of environmental features lost to earlier development must be established as design goals. Daylighting a watercourse previously "piped" might, for example, become a very high priority in an area to be re-developed. Accomplishing this priority would require visionary, long term planning and an emphasis on re-generation early in the planning process.
- Planning must be carried out on a "watershed" basis. The goal would be to make each watershed a diverse and ecologically viable unit.
- "Man made" systems should "mimic" nature and integrate with natural systems as seamlessly as possible.
- An integrated design approach to the community and its major systems is essential. A sewage system designed to recover energy and integrate other resources might, for example, provide both financial and environmental gains. Making future land use part of this design process could produce further gains and cause a rethink of the core design of the sewage system itself. Such benefits occur when synergies are sought.
- Inputs of energy and other external resources should be minimized. Technologies exist today, or are rapidly emerging, that will allow communities to become increasingly self-sufficient and eventually become carbon positive.
- Outputs of "waste" should also be minimized by making conservation a central goal and considering waste products as a resource to be re-cycled.
- Local resource use must be a priority. Locally produced food is, for example, a more sustainable choice than food produced thousands of kilometres away. To preserve this opportunity, policies must be established to preserve rural areas and keep them viable.
- Maximum flexibility to allow for adoption of improved technologies must be a design goal.
- Full life cycle costs for all systems must be considered. It is possible, for example, that a hybrid car involving heavy use of exotic materials might prove to be less sustainable than a more conventional car when life cycle costs are evaluated.
- Future changes must "set the stage" for a secure economic future. Maintaining and enhancing quality of life and place should be "**absolute**" goals.
- Aspects of social equity must be considered early in the design process. Affordable housing, for example, could be approached by mandating a certain percentage of non-market housing. Doing so would also help reach a goal of creating socially diverse communities.
- All aspects of affordability must be considered. Designing communities where car use is truly optional, energy use is minimized and food can be grown would contribute to affordability.

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A Design Process

The layered design process that follows demonstrates how conventional approaches to urban design could be modified to meet the goals of The Natural City. It would be ideally suited when comprehensive re-development of a large brownfield site is being undertaken and large scale planning can be easily achieved. Nevertheless, the process could easily be incorporated as a set of compulsory goals, principles and attributes for a designated, special re-development area. In this case, the new community would be created over time as a result of a series of single applications. Each application would not exist in a planning vacuum but would be required to meet the goals and design concepts of The Natural City. Obviously, the layers identified are not mutually exclusive. Instead they serve as a "convention" to establish priorities. Integrated design would remain a guiding principle.

Town and Country(Uptown) to the Mayfair Shopping Centre in Saanich is the area chosen as an example for this process. It is "poised for re-development", is an excellent example of the value of "**location, location, location**" and is situated near the focus for employment provided by the downtown core. In addition, it sits on the most important transportation corridor in the region, is close to other services and would constitute the re-development of already alienated land. These factors provide it with significant advantages over "sustainable" developments in less desirable locations. Finally, it goes without saying that the design process would be guided by the "three lenses" as well as by Natural City principles and attributes.

BASE LAYER - ECOLOGICAL FUNCTIONALITY

The base layer, created first, would deal with the ecology of the area to be re-developed. Planning on a watershed basis with the intent of returning the watershed and its components to ecological health would be a design goal. Remaining environmental assets would be protected but the design process would go further to consider possibilities for re-generation. Essentially, the question would be asked: "***In a perfect world, how could we restore this area to ecological health? Given the opportunity, what would we like to achieve?***"

The area from Town and Country to Mayfair has been heavily altered with little concern for the local environment. It contains important damaged assets such as the Cecelia Creek watershed. The base layer's primacy and "blank sheet" approach would allow for a comprehensive, visionary approach to restoring the health of this watershed including "daylighting" the creek and its tributaries. Re-establishing the urban forest, expansion of existing habitat and increasing connectivity are additional examples of regeneration that could be accomplished.

The vision of regeneration developed by the Ecological Functionality Layer would not initially be limited by the requirements of development. It would not be "written in stone" but **every effort** would be made to accomplish it to the **highest degree possible**. Changes in this base layer would be made very reluctantly. The Ecological Functionality Layer would be an important step in accomplishing the goal of "***designing with nature***".

LAYER 2 - AMENITY LAYER

Amenity is the second consideration in the process. As outlined under "***Attributes of The Natural City***", amenities could include, but would not be limited to: public open space, water features, landscaping, trail connectivity, schools, cultural and recreation centres, community centres, day care, streetscapes and the general pedestrian environment. Provision of a rich, well designed amenity plan is crucial to desirable re-development. Without such a plan, densified areas will be hard pressed to meet the goal of providing attractive alternatives to single family living and would be unlikely to meet other goals such as reducing longer trips. The Amenity Layer would represent an important step to accomplishing the goal "***to maintain and enhance the quality of life and quality of place that the region offers***"

The amenity layer would be built on top of the base layer and might begin to constrain it. As indicated previously, however, any changes would be limited and allowed **very grudgingly**. Also, the two layers would not be mutually exclusive. Daylighting a creek might, for example, provide opportunities to create an attractive feature, meet public space and recreational requirements and provide for trails and connectivity while at the same time increasing ecological functionality.

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LAYER 3 - SUSTAINABILITY LAYER

Global, regional and development area sustainability would be the core concept of the third layer. As outlined in the "**Attributes**" section, this layer would include amongst other goals: aspects of "**designing with nature**", integration of major systems, energy efficiency and attempts to limit resource draws and waste output. Specific systems would include but not be limited to design standards for: green or living buildings, water conservation, storm water management, sewage treatment, energy conservation and internal transportation networks. Proximity to existing services and dedicated right of way transportation networks would also be of concern. Opportunities in this layer are considerable. It would, for example, be feasible to design a multi-source water system that utilized scarce treated water only for showering and drinking. Less sensitive uses like landscape watering and toilet flushing would be met through collection or re-use of non-potable water. In a similar vein, some communities might become net contributors to the regional energy grid. Again, it must be emphasized that while individual systems have been identified for elaboration, integrated planning and design would be essential to the sustainability layer.

As before, this layer would be required to make **every effort** to respect prior layers. On the other hand, change that did not alter basic intent such as shifting the position of a daylighted creek could be easily accommodated.

LAYER 4 - SOCIAL SUSTAINABILITY LAYER

The first three layers would define many aspects of a "complete and livable community". The fourth layer would look at a complete community from a social perspective. Insuring that redevelopment includes the appropriate mix of uses and provides needed social services would be goals of this layer. In addition, integration of affordable housing and encouragement of a desirable social stratification of incomes and ages would be part of the planning process. Vancouver developments such as False Creek North and Twelfth and Arbutus provide examples of how at least some of these goals can be accomplished. Finally, as indicated in the "**Attributes**" section, housing price is only one aspect of affordability. The Social Sustainability Layer would expand on elements of the Amenity and Sustainability Layers to insure that affordability was incorporated broadly into community design.

LAYER 5 - DEVELOPMENT LAYER

Proposed development would constitute the final layer. This could take the form of a single comprehensive development or a series of individual applications. In any case, this is where "pro formas" come to life. Once the development industry knows what to expect, they are in an ideal position to make decisions about land costs and indicate the scope of development to "**make the whole thing work**". On a positive note, developers could proceed with the security offered by a high likelihood of approval. It is quite possible also, especially in the implementation of infrastructure and the amenity layer, that a mixture of public and private investment would be required. When public investments were needed they could be balanced against the potential for substantially increased future revenues. Finally, this is the layer where pressure to compromise the attributes of The Natural City will be strongest. It will take considerable commitment and courage to insure that undesirable compromises do not take place.

The design process described above does not differ greatly from traditional approaches with one exception. The usual approach is to acquire land, decide what will be placed on it then go about making it as sustainable as possible. The layered approach effectively turns this upside down. Rather than being "fitted into the project" after key decisions have been made, elements such as sustainability, amenity and social equity become the drivers of development outcomes. By putting them first, the layered approach has the potential to drive a paradigm shift in urban design. Like all dramatic shifts, it will meet with resistance and will require strong leadership and commitment to succeed. Hard work to be sure, but worth the effort. The Natural City offers prospects of critical and spectacular results. ***It is a vision of hope and promise for a future that begs to be embraced!***