

Which Green World?

The Politics of Technology in the Sustainable Redevelopment of Benny Farm

Daniel Goldberg

In many ways, the environmental crisis is a design crisis. It is a consequence of how things are made, buildings are constructed, and landscapes are used. Design manifests culture, and culture rests firmly on the foundation of what we believe to be true about the world.

[Sim Van Der Ryn, *Ecological Design*, 9]

“The great conceit of the industrial world,” writes David Orr, “is the belief that we are exempt from the laws that govern the rest of creation. Nature, in that view, is something to be overcome and subordinated. Designing with nature, on the other hand, disciplines human intentions with the growing knowledge of how the world works as a physical system.”¹

When we consider the prospect of design as ‘green’ or ‘environmentally friendly’ or ‘sustainable,’ the end goal is not a complete mastering of nature-as-resource, but the embrace of a harmony—of materials, of process, of impact, of use, of politics embodied in design choice—that frames our presence in the world in such a way that human life and human dignity are honoured and respected.²

Sustainable design represents the technical and philosophical commitment to make maximal use of a built environment or region while simultaneously limiting or eliminating outright destructive environmental impact.³ Ideally, the technologies developed or selected under such a design ethos are the result of a process of ‘negotiation’ between the designer and existing cycles and patterns of the natural world, rather than a top-down enforcement of human will on inanimate ‘nature.’ Ideally, too, democratic principles might inform our technical development.

One of the basic challenges for any consideration of green design, then, is figuring out what sort of world we want to build—what sort of world, that is, in which people might grow up to become responsible and engaged members of the community, citizens with an active interest not only in their own concerns, but with the wellbeing of their neighbours as well. To that end, our harmful impact on the living world must be minimized, eliminated, or deflected, and our ability to live together peaceably and without infringement on personal and political freedoms must be paramount.

So what should we look for in redeveloping our cities, our communities? What should we demand in terms of sustainability, or in terms of the pursuit of sustainability? Perhaps most importantly, what world are we being asked to sustain?

A solid case study to consider here is Montreal’s Benny Farm subsidized housing complex, which has been going through a highly publicized green redevelopment process for several years now. A heady combination of green retrofitting and new construction, the ‘Green Energy Benny Farm’ design has been widely recognized as a trailblazer in affordable green design.

Despite the accolades, problems quickly surfaced, highlighting the lack of a larger public

education and engagement program, the absence of an adequate local green construction infrastructure, and unwillingness on the part of municipal or provincial authorities to make fully public and transparent the process.

THE CASE OF BENNY FARM

We're trying to do stuff that is not rocket science, but it's more sophisticated than conventional systems; yet we're working within the structures of social housing, which require us to work with the lowest bidder... In the low-bid process, there is absolutely no incentive for a contractor to do a good job. All that there is is (incentive) to do it for as little money as possible. [Mark Poddubiak, quoted in *The Gazette*, September 4, 2007]

Covering 18 acres in the west end of Montreal, the Benny Farm complex is named after Scottish manufacturer Walter Benny. Benny purchased the property in 1883, eventually selling the once-agricultural land to a consortium of insurance companies whose goal was to build an affordable residential development for returning war veterans. Even then, one of the distinguishing features of the early Benny Farm was its strong emphasis on abundant public and green space.

In 1947, the Canada Mortgage and Housing Corporation (CMHC) took over the property management and gave veterans' families priority for the rental of units. A strong community feeling developed, with a number of social and family-friendly activities.

Though this gave way to decades of gradual decay and decline, as well as attempts at redevelopment and rezoning, the Benny Farm project nevertheless remained one of the borough's only affordable housing complexes and a structure vital to the urban diversity of the area.

When a private land management company purchased the entire project in 1999, they began working with local community groups around the

same time to open a dialogue about the eventual redevelopment of the project. After a lengthy consultation process, one in which the general public was sporadically involved, several local design firms were tendered to produce redevelopment proposals—the stipulation being that they must be sustainable and affordable, while preserving Benny Farm's inherent character and history.⁴

Montreal architecture think-tank L'OEUF won the vote for their proposal, *Green Energy Benny Farm*, a complete rethinking of the affordable housing project as fully sustainable community.

As designed by L'OEUF, Green Energy Benny Farm (GEBF) consists of three affordable housing developments within the Benny Farm complex. The design plan has been enthusiastically received by architectural and sustainable development scholars and activists alike, honoured by the Canadian Urban Institute and the Swiss-based Holcim Foundation for Sustainable Construction, among others.⁵

While it remains, at heart and in its core design philosophy, a comprehensive program for the redevelopment of a fifty-year-old affordable housing project, the architects had a more ambitious social and educational agenda. "Green Energy Benny Farm is a prototype for community-driven sustainability—designed to be copied," writes lead L'OEUF architect Daniel Pearl. The project, Pearl argues,

puts forward a model for the stewardship of a social, ethical, technical and financial ecology... The residents will be responsible for overseeing maintenance of the systems, thereby reducing the operating costs of the system. It's a model that is easily understood. Residents will also become user-ambassadors of the technology, able to represent the benefits of the system to the wider community (emphasis added).⁶

Receiving significant support from the public sector, GEBF was also trumpeted by Natural Resources Canada's Commercial Building Incentive Program as a model of sustainable build-

ing design (despite not being a 'commercial' establishment). GEBF has been widely recognized as a major trailblazer in green affordable housing. As L'OEUF's report to the Holcim Foundation boasts, GEBF represents "...the first large-scale partnership in the affordable housing sector where long term sustainability issues are front and centre."⁷

The design objectives and philosophy challenge conventional North American ideas about the core priorities of urban development. Lead L'OEUF architect Daniel Pearl writes:

Based on the idea of the City as a reconciliation of competing visions of society in the spirit of compromise (and not necessarily consensus), a shared green infrastructure provides a level playing field for a variety of interests. It is possible in this context to imagine an alternative social vision - one that opens the door to a renewed interpretation of the public domain, city-building and dwelling. Each resident of the member organizations will come to appropriate the project through their involvement in the overall management and in overseeing the operation and maintenance of the various systems. The voluntary, user-driven board, with representatives from each of the non-profit and cooperative housing projects that will be purchasing services, will also have representatives from the broader community... The most important outcome of the shared green infrastructure at GEBF is the opportunity that it provides the individual and the collective to determine their physical environment (i.e. bottom up) by being involved in the decision making process.⁸

Superb and progressive on paper, plagued with trouble in practice, perhaps it is not so surprising that [Benny Farm] experienced the setbacks it did.

But challenges developed quickly, highlighting the absence of a larger public education program, the lack of an adequate local green building infrastructure, and an unwillingness on the part of municipal or provincial authorities to open the building process to the community in question. While Benny Farm's current owners, the Canada Lands Company, invited tenders from several design firms in their efforts to revitalize the decaying housing project, public consultation was limited to a chance to voice which design images residents liked best. Nowhere was there any discussion of which technologies or models of community organization were available, nor what the pros and cons of different arrangements might be.⁹

Superb and progressive on paper, plagued with trouble in practice, perhaps it is not so surprising that the project experienced the setbacks it did. In the interest of encouraging "a wider dissemination" of the new sustainable residential technologies being introduced in GEBF, L'OEUF's proposal insisted that contractors for the installation and construction not be selected based on any particular sustainable construction experience. Similarly, the project's green infrastructure systems were offered up to contractors "for negotiation and implementation in hopes of encouraging the gradual transformation of the industry."¹⁰

At the same time, the residents were expected to take on the role of caretakers, again with little to no instruction in the operation or maintenance of the technologies involved.¹¹ Benny Farm remains an affordable housing project for families of low to modest income with little to no time to spend on complex maintenance schemes. As a small example, special light bulbs apparently blow out frequently and the only source for replacements is an industrial supplier at the other end of the city. It is

no surprise that so many residents have challenged the city of Montreal on elements of its rationale.¹²

Largely completed in 2006, GEBF calls attention to the shortfall between vision and implementation:

- In the interest of encouraging “a wider dissemination” of the new technologies being introduced in GEBF, L’OEUF’s proposal insisted that contractors for the installation and construction “...were not chosen based on previous sustainable construction experience.”¹³
- At the same time, residents, the vast majority of whom are seniors and young families of modest income, were expected to take on the role of caretakers, often with little to no instruction in the operation or maintenance of the technologies involved.¹⁴
- Despite promises of technological ease, better quality of life, and significant cost savings in utilities, residents have instead faced faulty ventilation, poorly installed solar panels, and a sporadically functional geothermal heating system.
- The rooftop solar energy collectors, meant to supplement the water heating within the complex, failed repeatedly. Antifreeze meant to circulate through the collector panels instead leaked through roofs and walls whose ‘envelope’ was to have been impermeable to liquids.
- Malfunctioning gas boilers set up as redundant backups to the geothermal and solar systems left residents with minimal heat or hot water numerous times through two winters.
- Mould has spread throughout both the refurbished and the newly constructed portions of the project, resulting from poorly installed and selected drywall, faulty seals on piping connecting the geothermal wells with the mechanized heating control centres, and numerous other insulation problems.¹⁵

The architects have since identified this as partly a faulty integration with the complex’s original systems and partly a result of corners cut by the builders.¹⁶ Regardless, residents are still entrenched in a system over which they have little control, but which nonetheless permeates their lives. In many cases, market conditions and stories surrounding the project have made resale a slim possibility.

DESIGNING THE SUSTAINABLE COMMUNITY?

*The best life possible... is one that calls for an ever greater degree of self-direction, self-expression, and self-realization. [Lewis Mumford, *Authoritarian and Democratic Technics*, 1-2]*

We are in the position—now, today—to make some very profound decisions about how we choose to live, with each other, with ourselves, with the world surrounding us. These are policy decisions, but they are also social and economic decisions. They are ethical decisions. We have the opportunity to seek not simply *sustainability* but also *resilience*. More than just minimizing disruption to social, economic or ecological systems, resilience *anticipates* and *adapts* to unexpected, widespread systemic change.

To be resilient is to embrace a number of principles already central to core humanist principles: accountability, mutual respect among community members and institutional stakeholders, open networks of communication, strong civic engagement and a commitment to shared prosperity. Whether these elements are compatible with ‘sustainability’ is up for debate.

A keystone argument implicit here is one I think vital to the contemporary humanist worldview: that *technology is politics by other means*. Technologies, particularly large-scale technologies of urban design—affect what can be done, where, by whom and how. Technologies are, in this sense, *legislative*. We tend to avoid thinking about most technologies in this way, approaching them instead as neutral artifacts, as tools. Their political ramifications remain opaque and resistant to substantive

critique, precisely because they implicitly stake a claim to hegemonic legitimacy.

However, 'green' makes a claim to the good life. Green takes a stand. Green technologies embody ideas of what nature is, of how we should live, of what our relationships should look like—with each other and with our shared world.

Perhaps what is needed is the participation and collective input of residents and other local stakeholders, the recognition and embrace of difference and diversity, solid communication and dialogue between neighbours and communities, and a strong emphasis on quality of life and health.¹⁷ Short of rebuilding much of the 'developed world' from scratch, much of the work in creating a sustainable future for our cities will involve urban redevelopment, as is the case with Benny Farm.

Furthermore, this kind of green, or ecological, or sustainable design encourages the experience of place or object as sites of continual personal growth and learning. Growing food locally in community gardens, for example, provides more than just nourishment—it also offers living and ongoing instruction in the life cycle and organic processes of soil, plants, and agricultural ecosystems. Likewise, renewable energy systems, due to the attention and highly technical care they require, not to mention their highly visible presence, engage users with lessons about energy use, flow, and generation.

The pursuit of resilience will nevertheless remain fraught; what matters is articulating a worldview capable of fostering more adaptive community models. Our approach to urban design can better support human integration—as opposed to imposition—relative to the ecosystems of the living world. Faith in the potential of 'sustainable' communities or technologies, by themselves, may be too easily damaged or lost to cynicism and disappointment by the socio-political aspirations, technological compromises or setbacks faced by projects like *Green Energy Benny Farm*.

If we are to choose, and to choose freely and wisely the ways in which future communi-

ties—particularly green communities—are to be built, developed and retrofitted, developing broad public environmental and technological awareness is essential.

There exists an opportunity to radically redefine Western social, economic and technological priorities in favour of long-term species survival, promotion of biodiversity and collective quality of life, but, if left unexamined, I fear for the co-opting of these principles by the very interests so toxic to the welfare of the planet and its inhabitants.

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Notes

1. Orr, *The Nature of Design: Ecology, Culture, and Human Intention*, 4
2. Ibid.
3. McLennan, *The Philosophy of Sustainable Design*, 4
4. Canada Lands Company, *Benny Farm Redevelopment*, 3
5. Stasna, *Benny Farm Taps into Green Energy*, *The Montreal Gazette*, July 9, 2006
6. Pearl, *Greening the Infrastructure at Benny Farm*, 20
7. Pearl, *Greening the Infrastructure at Benny Farm*, 10
8. Pearl, *Greening the Infrastructure at Benny Farm*, 19
9. Canada Lands Company, *Redeveloping Benny Farm & Stasna, Harsh Reality of a Green Plan*
10. Pearl, *Greening the Infrastructure at Benny Farm*, 11
11. Pearl, *Greening the Infrastructure at Benny Farm*, 12; Stasna, *Harsh Reality of a Green Plan*
12. Stasna, *Harsh Reality of a Green Plan*, *The Montreal Gazette*, September 4, 2007
13. Pearl, *Greening the Infrastructure at Benny Farm*, 11
14. Pearl, *Greening the Infrastructure at Benny Farm*, 12; Stasna, *Harsh Reality of a Green Plan*, *The Montreal Gazette*, July 9, 2006
15. O'Hanley, *Learning from Benny Farm's Mistakes*; Stasna, *Harsh Reality of a Green Plan*, *The Montreal Gazette*, July 9, 2006
16. Stasna, *Harsh Reality of a Green Plan*, *The Montreal Gazette*, July 9, 2006
17. Pierce 1999, 289; Newton, *Sustainable Development and the Moral Life*; Roseland, *Toward Sustainable Communities*