

CASE IN POINT 2009

Waverley West

innovative subdivision?

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Waverley West boundary amidst south end neighbourhoods
(Southwest Fort Garry Design Charrette, 2003)

ABSTRACT

In the city of Winnipeg developers are in the process of creating a mixed use subdivision known as Waverley West. The intended goals are to create a more densely developed neighbourhood, with minimal environmental impact, that will meet the future housing market demands of Winnipeg. From the onset, many were optimistic that Waverley West could become an innovative suburb, incorporating sustainable and ground-breaking design features seen in other urban centres but not previously tried in Winnipeg. Waverley West has been praised for its attempts to improve suburban design, but heavily criticized for its failure to go far enough. The project has been described by critics as a 50% success. The intent of this report is to identify reasons for the ensuing compromises that were, or will be implemented, for the final development plans that supposedly kept it from becoming a 100% success.

The information was obtained through collaboration with Dr. David Witty, research of available documents and discussions with members of the private and public sector involved in the project. This paper provides a better understanding of the development process, the limitations and lessons learned that may help inform better policies and practice for future suburban development.

BACKGROUND

One of the last remaining serviceable tracts of land in Winnipeg, approximately 3000 acres, has been identified for subdivision development. The project, known as Waverley West, is a seven phase development (the first which is presently underway), expected to house close to 40,000 people upon completion. Six residential neighbourhoods and one town centre with mixed use commercial services will be developed over an estimated 20 year time span, resulting in approximately 10,000 new dwelling units, of which, 20% will be multiple-family and 80% single family. An area structure plan (ASP) has been adopted as an overarching document that will guide the development. Neighbourhood area structure plans (NASP), the equivalent of secondary plans, will be created for each of the seven phases. The NASP's are meant to further define the principles of development in detail.

FACTS OF THE CASE

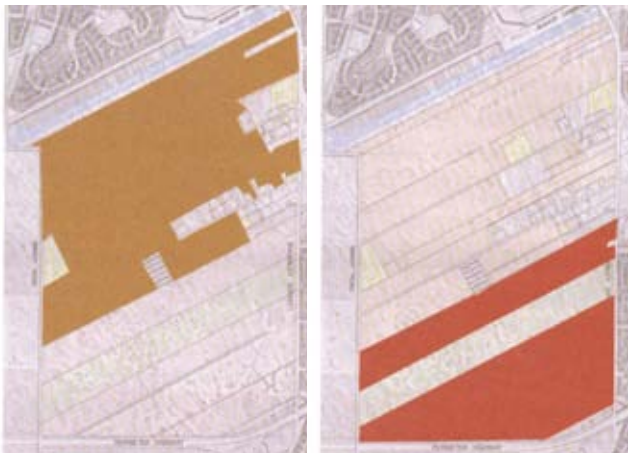
the process

The project was set in motion in 2002 when the Manitoba Housing and Renewal Corporation (MHRC) and Ladco, two primary land owners of the site, requested an amendment to the Plan Winnipeg 2020 by-law that would allow residential development to occur on their land.

In 2003, a design Charrette, hosted by the University of Manitoba's Faculty of Architecture, was conducted over three days with seventeen professionals in the related planning and design fields, as well as NGO's and citizens.

Province of Manitoba (MHRC)

Ladco et al.



Land ownership designation (Southwest Fort Garry Design Charrette, 2003)

The goals of the charrette were to explore possible design solutions for the Waverley West development based on the questions: "How would contemporary propositions about New Urbanism, walkable neighbourhoods and more sustainable urban development, 'translate' on the ground at this site?" "What would it look like?" And, "what is possible in this place, with its particular limitations and opportunities?" Three teams each came up with proposed solutions for the future development of Waverley West based on Smart Growth, and other innovative planning solutions (Southwest Fort Garry Design Charrette, 2003).



Sample Plan from (Southwest Fort Garry Design Charrette, 2003)

Several background studies were conducted to support the decision of approval for the project, including market analysis, cost-benefit analyses, regional reviews, and preliminary transportation and traffic impact studies (North East ASP, 2006).

A residential land supply study was conducted in 2004, by the City of Winnipeg, which concluded that there was a shortage of un-serviced and serviced land especially in the south west end of the city. New housing was deemed necessary for the following reasons:

- 1) there will be an estimated increase of 4000-6000 people per year
- 2) there will be a reduction in the average person per household from about 2.5 to 2.3
- 3) single-family housing is the dominant type favoured by the market
- 4) low interest rates make homeownership appealing (Residential Land Supply Study, 2004)

In 2005 City Council amended the Plan Winnipeg 2020 by-law, changing the designation of the Waverley West site from a Rural Policy Area into a Neighbourhood Policy Area. Plan Winnipeg 2020 now states in section 3B-08 iii) that “allowing the re-designation of Rural land to Neighbourhood or Industrial” may occur “only where there is a demonstrated need for additional land to satisfy projected demand and where a full range of municipal infrastructure can be provided in an environmentally-sound, economical, and timely manner” (Plan Winnipeg 2020, p.34).

According to the City of Winnipeg, the policies for which the approval of an amendment was made “represent critical core Plan Winnipeg principles and are intended to ensure that new development continues to be planned in a manner that promotes an efficient and compact urban form” (Area Structure Plan (ASP) Draft, 2005, p.5).

A public hearing was held in January, 2005 where MHRC discussed environmental features for the development and identified the possibility of incorporating geothermal energy into the project. Ladco discussed promotion of higher density, and transit issues were discussed in regard to the proximity of the Waverley West development and the eventual southern terminal of the Bus Rapid Transit (BRT) system.

In June 2005, an open house and workshop attended by approximately 200 people, was held to gain feedback by the general public and stakeholders for the project.

December, 2005, the Area Structure Plan was written. This established a land use planning structure and provided broad planning objectives for Waverley West (ASP Draft, 2005).

August, 2006, the Northeast Area Structure Plan (secondary plan) was completed. That is intended to guide broad planning issues such as transportation, land use and servicing for the first phase of Waverley West (Northeast ASP, 2006).

The main consideration of the NASP is to ensure the integration of the new Northeast neighbourhood into future Waverley West Developments as well as existing, surrounding developments (Northeast ASP, 2006).

The Northeast ASP was developed through consultation with landowners, existing residents, adjacent neighbourhoods, and interested citizens.



Layout of Northeast Neighbourhood (Northeast NASP, 2006)

Several public workshops were held in relation to developing the Area Structure Plan which “sets out the high-level planning direction for Waverley West” (Northeast ASP, 2006).

Throughout 2007, construction of the first phase of infrastructure and housing units is underway. In 2008, homes were available for occupancy.

April, 2009, construction continues on the first neighbourhood phase, now known as Bridgewater Forest. Approximately 100 houses have been constructed.



Entrance Sign to Bridgewater (First Neighbourhood phase) Photo Credit: Devin Clark

Policy and Design

The project has received substantial coverage in the media and has become a controversial topic gathering both praise and criticisms. Several features of the project indicate that steps have been made towards developing a better suburb. Critics argue, however, that while steps in the right direction have been made, there is still plenty of room for improvement when it comes to innovative suburban development. The following discussion will show how the policies have shaped the design strategies.



Town Centre design sketch (Southwest Fort Garry Design Charrette 2003)

Area Structure Plan

The ASP was created to guide development and establish the land use planning structure and broad planning objectives for Waverley West in relation to the Plan Winnipeg 2020 “Neighbourhood Policy Area” (ASP, 2005). The word ‘sustainable’ does not appear in the ASP. Nor does it appear in the “Neighbourhood Policy Area” section of the Plan Winnipeg by-law. However, the word ‘sustainable’ does appear in the Plan Winnipeg by-law under ‘Ensuring Responsible Government.’ Here, it is stated that a commitment to sustainability and to the reduction of Greenhouse gas (GHG) emissions shall occur. Policy 2B-01 states that “The City shall commit to sustainability by: i) establishing and adhering to a set of guiding principles for sustainability against which policy decisions and actions can be evaluated” (Plan Winnipeg 2020, p. 22).

Policy 2B-02 states that The City will commit to the reduction of GHG emissions by:

- “i) reducing the need for motorized transport though integrated planning and promotion of compact urban form and mixed land use
- ii) providing realistic alternatives to single occupant use
- iii) encouraging energy efficiency in subdivision design, land use planning, home retrofitting, and building code requirements
- iv) proposing positive incentives to encourage energy efficiency” (Plan Winnipeg 2020, p.22).

The ASP commits to the objectives of the “Neighbourhood Policy Area” of Winnipeg’s Planning By-law, and overlooks the commitment to sustainability which appears in the “Ensuring Responsible Government” section. Therefore no guiding principles of sustainability will be incorporated that would allow for policy decisions and actions to be evaluated.

Because the word sustainable does not appear in the ASP or NASP does not mean that sustainable design features will not exist in Waverley West. The Northeast Area Structure Plan indicates several environmental features will exist in the neighbourhood. For example, thirty acres (or about 10%) of the neighbourhood will preserve and integrate an existing aspen forest that acts as a carbon sink, reducing carbon emissions in the atmosphere.



Forest preserve, with pathway in Bridewater Forest neighbourhood Photo Credit: Devin Clark

The plan also states that “the Northeast Neighbourhood is environmentally friendly” and that:

- “alternate forms of energy are encouraged in order to minimize the use of fossil fuels
- The Northeast Neighbourhood makes use of ground source heat pump technology for residential heating and cooling
- The street system is designed to maximize the use of passive solar energy for a substantial majority of homes by orienting lots to within 30 degrees of due south
- The retention pond system is designed to take advantage of naturalized solutions that enhance water quality and make use of native plant species
- LEED Standards for neighbourhood development are promoted and incorporated wherever possible”

(Northeast Neighbourhood ASP, 2006, p.8)

Dr. David Witty states that even though ground source heat pump technology shows up in the NASP, he does not believe any have been installed to date. While sustainable standards may not be legislated or clearly defined in the plan, some aspects of the project could be considered ‘sustainable’ without being labelled ‘sustainable.’ Unfortunately, sustainability only really counts at the implementation level and at this point, what’s written in the policies is not translating into what is being built.



Public education board, describing features of the neighbourhood. Photo credit: Devin Clark

Density

Increased density is a significant component of improved urban design and has been identified in the objectives of Waverley West. The estimated number of residents for Waverley West upon completion is 40,000 people. It has been assessed that approximately 1,740 acres will be used for residential development, of the 3,075 acres that make up Waverley West. When the calculations are made, this means that there will be on average 23 people per acre. Typical suburban developments often have four dwelling units per acre, and today, house 2.5 people on average (Land Use Study, 2004). These numbers show that it would require 5.75 people per household in order to fulfill the projection of 40,000 people.



Example of single-family detached home in Bridgewater Forest. Photo credit: Devin Clark

The Northeast Area Structure Plan indicates that “Small lot single family or high density single family, two family and greater density uses shall be the predominant use with target densities of approximately 7-20 units per acre” (Northeast ASP, 2006, p.14). The Northeast ASP also indicates that residential design will “vi) maximize density in lower density residential areas by minimizing front yard setbacks subject to market demand and required City of Winnipeg approvals” (Northeast ASP, 2006, p.13).

Density policies were incorporated to ensure efficient use of land and promote transit use (Northeast ASP, 2006). It is expected that the Northeast neighbourhood will have lower densities than the rest of the neighbourhoods of Waverley West because of the significant amount of forest that exists within the area.

However the Northeast ASP states that “policies in this section create an opportunity for transferring density between Neighbourhood Areas in order to achieve overall density targets” for Waverley West (Northeast ASP, 2006, p.19).

Dr. Dave Witty responds to the targeted densities expected to be achieved with 80% single-detached housing and 20% multiple-family housing. He states that “in the lower mainland of B.C., the split for new developments is 60% single-family, and 40% multiple-family, with goals of becoming divided evenly at 50/50. Quite a difference from what is occurring here in Winnipeg.” These figures show that while density is a consideration in the Waverley West plans, it is clearly not being held up to the optimal objectives that others seek to achieve in other parts of the country.

Transportation and Linkages

An estimated 10,300 vehicle trips per day is expected to occur in Waverley West upon completion and will require an efficient road system to move people in and out of the area (MMM, formerly NDLea, 2007). The intent of transportation design in the Northeast ASP is to provide an efficient network of roads and paths, for vehicles, public transit and pedestrians. Principles of connectivity, access to active transportation systems and convenient public transit are emphasized. A hierarchy of streets will be developed to ensure safe and effective movement throughout the neighbourhood and beyond. (Northeast ASP, 2006). The use of the automobile is a significant contributor to greenhouse gas emissions and alternative forms of transportation are being promoted in the neighbourhood design. All lots are expected to fall within 400 metres of a bus route, while higher density lots are expected to fall within 200 metres (MMM, formerly NDLea, 2007). The proximity of the proposed Bus Rapid Transit (BRT) terminal on Pembina Highway is expected to factor into the improved efficiency of public transportation.

A network of pathways is being constructed that places more of an emphasis on the pedestrian and less emphasis on the automobile, with sidewalks on both sides of the street, and recreational paths linking the neighbourhood. House facades have been developed in a manner that minimizes the focus on the front garage, which does little to reduce driving behaviours,

but acts more as a display that the architectural emphasis is not on the automobile.

Dr. David Witty argues that the density policies will not ensure optimal use of land and believes that the densities required to promote and support public transit use on a successful level, will not be met.

Naturalization

Natural land drainage systems have been incorporated into the Northeast neighbourhood, however little is explained in the ASP or Northeast NASP that defines what system is used, or explains the benefits of such a system.



lake/drainage system in Bridgewater Forest. Photo credit: Devin Clark

CONCLUSION AND OUTCOMES

Critics have argued that many gaps exist in the planning and development process in Winnipeg. One such gap is the relationship between the City’s Planning Department, the City’s Councilors and private developer and design firms. The lack of communication and coordination makes planning a difficult task. A ‘marriage’ of these entities could allow for better planning in Winnipeg and create a more forward thinking body that would make projects such as Waverley West more successful.

Geo-thermal power was at one time a consideration of the project and there are varying opinions as to why it was not mandatory in the final design plan.

Some say that it was not implemented because studies concluded the ground quality was not suitable for geo-thermal, and that a miscalculated political move revealed the idea to the media before proper studies had been conducted. Others say that geo-thermal was not incorporated due to short sighted planning efforts. One land developer found that the majority of people live in their first house for five years and that financial benefits from geo-thermal would not be seen for twenty years. This delay in financial returns could be a disincentive for home buyers and therefore place too much risk on the developer. It has been suggested that for future planning in Winnipeg, geo-thermal should be supported early on in the planning process. Manitoba Hydro should be willing to invest in the front end to some degree, thus reducing the risk and financial burden of the developer and increasing value for homeowners.

A gap has also been identified in how best practice is implemented. For example, in Manitoba's provincial planning legislation, bio-swales are identified as the optimal solution for dealing with natural drainage systems. Presently, the City of Winnipeg standards recognize that bio-swales are an "option" for natural drainage systems. They have not adopted them as mandatory in their planning policies and each time they are proposed an extensive application process is required. Native grasses are another example of best practice, and when one of the developers initiated to implement them, they found that they had to get permission from the City to do so. These examples show that there is a need for greater leadership by the City of Winnipeg for environmental and sustainable solutions that can be implemented at the ground level in an efficient manner.

In terms of environmental needs it has been noted that there are few specifics in the development plans. Sustainability does not show up as a guiding principle for the neighbourhoods even though it is a policy requirement in the Plan Winnipeg 2020 by-law. There appears to be a disconnect between the planning by-law and the area structure plans, which offer no mention of sustainability and how sustainable features will be measured.

This is not to say that, because the word sustainable does not show up in the planning documents, the designs are not sustainable, it just simply emphasizes that there is a need to clarify objectives of sustainability for the project and provide a system by which they may be measured.

LESSONS LEARNED

Several lessons can be learned from this project that may help inform future subdivision development in Winnipeg.

First, sustainable practices and performance standards need to be clearly identified early in the planning stages so that guidelines can be followed and targets can be met and measured. Second, all parties involved need to clearly share the vision and implementation process of the project. Better relationships and communication need to occur between the City's Planning Department, the City's Councillors and private developers and designers.

Third, big ideas such as walkability, density, geothermal, natural drainage etc. need to be resolved at all levels (economic, operational and environmental) so that it is clear to all parties involved what best practices are and how these can be adopted and implemented.

Winnipeg needs some champions that will strive for the best. People that will take on risk and challenge the norms of planning. People that will think big and achieve big. Because,.....

“It is better to shoot for the stars and miss than aim at the gutter and hit it.”

- Anonymous

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