Baldur, MB. Photo Credit: Dickie, R. 2011


Photo Credit: Plater-Zyberk, 2009

Infill Development

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Infill is a term for new building construction on a previously developed area of land. It is most often carried out on lots that are abandoned or underutilized. Because of this, infill may work together with the practice of *adaptive reuse*.

Infill in Canada is often associated with narrow housing that has been built onto subdivided lots, but several Manitoba towns have recently applied infill development on commercial and industrial properties in creative ways to improve the overall urban environment of their towns for all ages (see reverse for examples).

Why Infill?

But why is it more beneficial for a town to utilize infill practices instead of developing new areas on the outskirts?

Despite the potential up-front costs of removing or retrofitting a preexisting structure, infill and adaptive reuse have a number of long-term environmental and economic benefits over new low-density developments on the edges of a town:

Infill has a number of long-term environmental and economic benefits.

- Infill lowers per capita automobile emissions because less driving is needed in compact towns;
- Infill lowers per capita water use because infill housing lots typically have smaller lawns;
- Infill lowers domestic heating costs because of the insulating effect of densily-developed housing (grouped buildings retain up to 50 more heat than individual buildings);
- Infill preserves agricultural farmland: a key economic sector for many prairie small towns;
- Infill helps to reduce community health problems like obesity, because "when people have an opportunity to live, work, and play in a closer proximity, they are more likely to walk or take the time to participate in activities that facilitate movement" (Frank et al., 2004);
- Infill development greatly reduces physical infrastructure costs (in the form of utilities, pipes, and roads);
- Infill development reduces social infrastructure costs (Abbot, 2009; Frank, 2004; Newman & Kenworthy, 1999; Roseland, 2005).


Photo Credit: Plater-Zyberk, 2009

Figure #1: Image of a correct use of mixed-use infill to restore a previously-sprawled townscape.


Photo Credit: MB Culture, Heritage & Tourism, 2007

Figure #2: Carberry's Heritage Conservation District, with public washroom in foreground.


Photo Credit: Interlake Trading, 2013

Figure #3: Adaptive reuse has transformed the Warren grain elevator into an interpretive centre.

Infill and Age-Friendliness

Reducing social infrastructure costs is a key to having an age-friendly community, because the ability to travel longer distances becomes more difficult with age:

> "When our communities require cars for participation in social life, who is marginalized and excluded? Clearly, it is the non-drivers. And who are the non-drivers? They are our children, our senior citizens, our physically challenged, and our very poor" (Roseland, 2005).

When our communities require cars for participation in social life, who is excluded?

It is also increasingly important for people to have close access to amenities as they age. According to research, 59 percent of those over the age of 85 suffer limitations to the activities required for daily living, which include meal preparation, shopping, and personal care (Hodge, 2008). Infill development thus provides a multifaceted solution to these problems.

Infill Opportunities

Many creative infill projects have recently been completed in towns across Manitoba. These infill projects, although unique, may be applicable to other towns in the province with similar spaces:

Old Sports Arenas: The town of Russell, Manitoba recently completed a project for adaptive reuse of several hockey arenas in their area. They renovated the Russell Memorial Area into a "multi-use recreation complex" and salvaged arches from the old Dauphin arena to be used as lighting and street-scaping along their Main Street (Figure 4, Russell, 2005).


Photo Credit: Hanebaum, 2008

Figure #4: Arches from the old Dauphin arena are used as street-scaping along Main Street in Russell, Manitoba.

Heritage Buildings: Many towns have heritage buildings that have been neglected or retrofitted with vinyl siding over the years. The town of Carberry, Manitoba set up a Heritage Conservation District to restore these buildings using "historically-sensitve renovations" through $10,000 in grant money per year (Figure 2, Carberry, 2008).

Grain Elevators: Grain elevators used to be the most significant landmarks in prairie towns. The West Interlake Trading Company recognized the value in this and worked to save the grain elevator in Warren, Manitoba from demolition by turning it into an interpretive centre and using the attached quonset as a country market (Figure 3, West Interlake Trading Co., 2013).

Figure #5: A typical gas station lot.

Figure #6: Infill applied on a gas station lot to bring back life to the street.

Gas Stations: Open gas station lots ruin a streetscape and decrease density. Infill development can be used to keep the pumps and make a new gas station and a corner store on the street front (Figures 5 & 6, Duany Plater-Zyberk, 2009).

Railroad beds present infill opportunities for mixed-use developments

Railroad Track Beds: Many Manitoba towns contain railroad tracks, although trains no longer service their area. Because the tracks often run through the town centre, these beds present infill opportunities for important mixed-use developments or higher-density housing. However, towns suffering from connectivity issues may convert them into walking trails or develop them as parks (Figure 7).

Large Residential Lots: Housing lots can be subdivided into duplexes to add density throughout a town. Parking can be moved to the side of buildings to maximize usable space (Duany Plater-Zyberk, 2009).

Figure #7: Railroad track beds may also be turned into community parks, like this area near the rail beds in Beausejour, Manitoba.

Infill Policies

Each town will need to codify its own infill policy in order to ensure proper development. To be most effective, these codes should follow the guidelines set out in Manitoba's *Provincial Land Use Policies* that sum up five of the key principles of infill development:

1. The emphasis of future development and growth should be on existing settlement areas, where investments have already been made.

2. A growth centre strategy that prioritizes the settlement areas to which development will be directed, must be prepared by the local authority. The highest priority for directing growth should be to urban centres with diverse and widely accessible public services and amenities.

3. Municipal financial plans and capital plans should be coordinated and linked with the growth centre strategy.

4. Growth and development of settlement areas should occur in a planned and contiguous manner that emphasizes compact form. New growth areas must take place adjacent to compatible, existing development.

5. Settlements will be directed away from areas deemed vulnerable to future climate change impacts (Manitoba Intergovernmental Affairs, 2009).

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