TRANSIT-ORIENTED DEVELOPMENT CASE STUDY

PORTLAND HILLS RESIDENTIAL COMMUNITY, Dartmouth (Halifax Regional Municipality), N.S.

FIGURE 1

PORTLAND HILLS RESIDENTIAL COMMUNITY

View of Portland Hills showing housing mix, including low-rise apartments, townhouses and single-detached homes

Source: Clayton Developments

Project data

Project name	Portland Hills Residential Community
Developer	Clayton Developments (master planning and land development); buildings built by several local builders.
Date completed	2004–2008
Site area	111 ha (274 acres) total. Park/streamside buffer 10.5 ha (26 acres); Commercial 1.7 ha (4.3 acres); Rapid Bus Transit Site 1.9 ha (4.7 acres); School site 3 ha (7.3 acres); Residential 92 ha (227 acres); 1.9 ha (4.8 acres) community park.
Number, type, size of residential units	423 single-detached units, 269 townhouse units, and 440 multi-family units.
Other land uses on the site	Retail 4,600 m^2 (approx. 50,000 sq. ft.), school site, and rapid bus station.
Gross residential density	10.6 units per hectare (uph); 4.27 units per acre (upa).
Maximum height	4 storeys for multi-family and 2 for commercial.
Parking	35 commercial at-grade stalls; 1.4 stalls per multi-family unit (50% underground, 50% at-grade) and 2 stalls (1 garage, 1 driveway) per single-family unit provided by developer. 231 at-grade stalls for park-and-ride provided by HRM.
Unit selling prices	$260,000 to $400,000 (2003 prices).
Type of transit	Bus Rapid Transit; implemented after Portland Hills was planned.
Distance to transit station	50–500 m (160–1,600 ft.)
Pedestrian connectivity	Extensive network of recreational pedestrian trails throughout the site with direct connections to schools and the station. The station also can be accessed by foot along the main arterial.

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PROJECT SUMMARY — Portland Hills Residential Community

The Portland Hills development occupies a 111 ha (274 acres) site within an established, low-density, auto-oriented suburban context. At build out, the development will include 423 single-detached units, 269 townhouse units and 440 multi-family units, in a variety of lot sizes and locations relative to amenities. A multi-tenant commercial retail area is also located at the gateway of the site. This project might not be considered a typical transit-oriented development but today is adjacent to a major bus rapid transit (BRT) station that was planned and implemented after Phase 1 was completed. Other uses on the site include a 3.0 ha (7.3 acres) elementary school site, 10.5 hectares (26 acres) of open space (as stream and lake buffers, etc.), and a 1.9 ha (4.8 acres) community park.

The Portland Corridor, the MetroLink service running adjacent to Portland Hills, is a 14 km (9 mi.) rapid bus transit corridor with a total of five stations. The BRT serves mainly low-density residential communities located along Portland Street, as well as an existing hospital campus and a new community college. Portland Hills is located immediately adjacent to the terminus station, the Portland Hills Station. The station site also accommodates 231 free park-and-ride parking stalls for passengers.

FIGURE 2 *Regional context map*

TRANSIT SYSTEM OVERVIEW AND PROJECT CONTEXT

In 2002, the need for rapid transit corridors to downtown Halifax was identified as a priority in the Halifax Regional Municipality's (HRM) Transit Strategy as a way of relieving very congested regional roads. In response, the HRM launched a limited-stop, mixed-traffic express bus service, called MetroLink, along two corridors from the suburban communities of Sackville and Cole Harbour to downtown Halifax in 2005, with the help of Transport Canada. The 14 km (9 mi.) Portland Corridor and the 22 km (14 mi.) Windmill Corridor are both equipped with transit signal priority (TSP) and bus queue jumping lanes[1] to give buses an edge over regular vehicular traffic at key intersections.[2] MetroLink routes are supplemental to Metro Transit's regular services and augment the Transit services already in place.

Passenger access to the BRT service is limited to terminals or stations along the corridors, in order to minimize loading times and bus travel times. Two new stations were constructed to provide a terminal for each corridor, and the remaining stations were made through upgrades to existing Metro Transit terminals.

[1] Bus Queue Jumping Lanes: An additional travel lane on the approach to an intersection with traffic signals. Most often, bus queue jumping lanes are restricted to transit vehicles, though some variations may permit bicyclists, mopeds, and/or motorcycles. The lane allows higher-capacity vehicles to cut to the front of a queue (that is, of cars waiting at an intersection), reducing the delay caused by the signal and improving the operational efficiency of transit.

[2] Transport Canada, March 2006. Urban Transportation Showcase Program, Halifax Regional Municipality – MetroLink. www.tc.gc.ca/programs/environment/UTSP/ProgressupdateHalifax06.htm. English and French. Retrieved January 2009.

FIGURE 3

Location map showing Portland Hills Terminal Station and Bus Rapid Transit Line

Source: Clayton Developments

Stations are designed to permit comfortable and convenient passenger transfers between transit and various access modes, as well as the innovative integration of specialized transit services for persons with disabilities. Along both corridors, stations offer real-time bus arrival information based on an existing automatic vehicle location system. The service has been very well received by the public and ridership targets have already been achieved ahead of schedule.[3] On average, 33 per cent of passengers walk to the station, 22 per cent arrive by car and use the park-and-ride facility, 24 per cent take transit to and from the station and 11 per cent are dropped off and picked up by car. The surveys also indicate that 22 per cent of MetroLink riders are new transit users.[4]

MetroLink received funding from Transport Canada's successful Urban Transportation Showcase Program. This was a five-year program created to demonstrate, evaluate and promote effective strategies to reduce greenhouse gas (GHG) emissions from urban transportation.[5]

The MetroLink service running adjacent to the Portland Hills mixed-use community, the Portland Corridor, is a 14 km (9 mi) transit corridor with five stations. Along the corridor, riders from Cole Harbour and Dartmouth are connected directly to downtown Halifax. The service serves mainly low-density residential communities located along Portland Street, an existing hospital campus and a new community college. It also enables downtown commuters to save time by transferring to the Woodside harbour ferry. Portland Hills is located immediately adjacent to the terminus station, the Portland Hills Station, which has 231 free parking spaces for passengers.

During the planning of the Portland Corridor, other transit technologies, such as fast ferry and commuter rail service, were investigated. Rapid bus was deemed the most appropriate technology since it would relieve congestion along the at-capacity Portland Street and was in the end the most financially feasible strategy. Existing transit demand along the corridor, land availability and longer-term plans for new residential development along Portland Street (and surrounding area) combined to prioritize service routing, technology and the Portland Hills Station location. An objective was to place the station near "the end of the queue" for cars waiting to travel to downtown Halifax.

FIGURE 4

Portland Hills terminal Station and Rapid Transit Line

Source: Clayton Developments

[3] Transport Canada, March 2006. Urban Transportation Showcase Program, Halifax Regional Municipality – MetroLink. www.tc.gc.ca/programs/environment/UTSP/ProgressupdateHalifax06.htm. English and French. Retrieved January 2009.

[4] Transport Canada, March 2006. Urban Transportation Showcase Program, Halifax Regional Municipality – MetroLink. www.tc.gc.ca/programs/environment/UTSP/ProgressupdateHalifax06.htm. English and French. Retrieved January 2009.

[5] HRM Metro Transit, Bus Rapid Transit (BRT) Showcase "Innovation Towards Integrated Bus Rapid Transit Home Page." Retrieved January 2009 from http://www.halifax.ca/metrotransit/BRT.html. English.

The Portland Corridor draws on a large number of potential riders and extends beyond Cole Harbour as far away as an estimated 35 km (22 mi.) down Portland Street. During the planning and development of the Phase I portion of Portland Hills, HRM Metro Transit purchased the site from the developer as a site for the Portland Hills MetroLink Station. In effect, the station location was selected after the planning and Phase I and II of the development of Portland Hills.

DEVELOPER'S PERSPECTIVE

With the Portland Hills project, Clayton Developments aimed to expand its development portfolio in this prized area in Dartmouth. Clayton has been developing in and around the Morris-Russell Lake area in Dartmouth since the 1970s beginning with Colby Village, a large, mostly residential community immediately to the east.

Clayton acquired the development site in 1996 and quickly commenced the master planning and HRM's development agreement negotiating processes. At the time of purchase, the undeveloped site was well-vegetated with a mix of hardwood and softwood trees, while parts of the northern section closest to Portland Street had been already cleared.

Bell Run, a watercourse linking Bell Lake to Morris Lake, traverses the site and differentiates the Phase I site (north of Bell Run) and Phase II (south of Bell Run). Phase I and Phase II had unique development agreements with the HRM and therefore were planned in separate processes. The property is typified by steep slopes and erosion-prone silty soils, requiring an environmentally sensitive development approach.

At build out, the Portland Hills development will include 423 single-detached units, 269 townhouse units, and 440 multi-family units in four-storey low-rise buildings (of which 100 units will be designated for seniors), in a variety of lot sizes, locations and designs.

A multi-tenant commercial–retail area is also located at the gateway of the site. Only one retail site has been developed as an auto-oriented commercial development. It was leased by a veterinarian for a clinic. Recognizing that access to convenient transit service was a positive feature of a community like Portland Hills, the developer was amenable to reducing

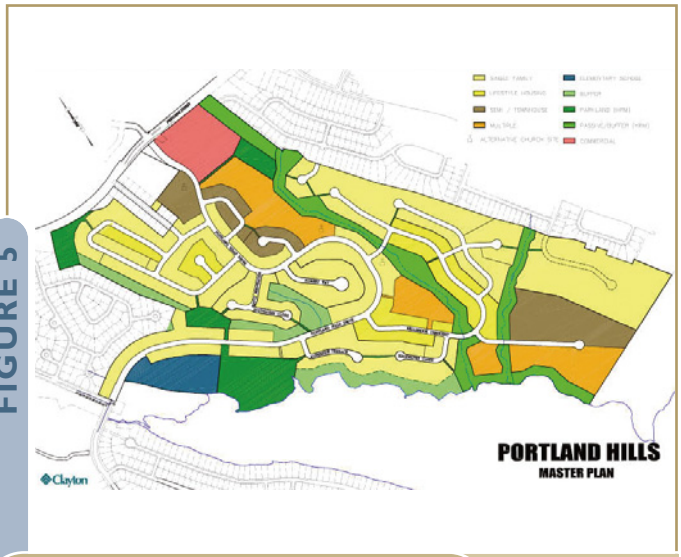

FIGURE 5

Portland Hills master plan

Source: Clayton Developments

the sale price for a 1.9 ha (4.7 acres) portion of the site zoned for retail to the HRM for the MetroLink Portland Hills Station. Other uses on the site include a 3.0 ha (7.3 acres) elementary school site, 10.5 ha (26 acres) of open space (as stream and lake buffers, etc.), and a 1.9 ha (4.8 acres) community park.

Parking and bicycle storage

Each single-detached unit and townhouse was required to include one garage parking space and one driveway parking space. For multi-family units, builders were required to provide 1.4 parking spaces per unit, with half underground and half as surface parking. Although not required, each multi-family building provided secure indoor bicycle storage.

The 231 parking spaces for the park-and-ride are all at-grade and all provided by the HRM. The number of spaces reflected the estimated numbers of site users. The park-and-ride facility is now at capacity during peak hours, despite a recent addition of several new parking spaces. Overflow parking is now within the residential area of Portland Hills along Portland Hills Drive and some minor residential streets. The developer provided an additional 35 commercial-use spaces, all at-grade.

Transit-Oriented Design Considerations

The transit facilities were designed and developed after the development of Phase I of the Portland Hills project. However, while Portland Hills was not originally designed as a transit-oriented development, the City negotiated with the developer to include transit-supportive strategies during the master planning of the site.

First, a direct and paved pedestrian connection was provided to connect the transit station and Portland Hills Drive. Second, denser forms of development were placed closer to existing and planned transit corridors.

Portland Street was an existing transit corridor during the master planning phase (local bus service was in operation prior to MetroLink) and Portland Hills Drive is planned to carry a local bus service. Multi-family units and townhouses were located near both of these major and minor transit corridors. A portion of the Phase II site would have been ideal for higher-density development, but neighbourhood concerns resulted in low-density, single-family units in that location.

Project Success and Costs

Prices for the various units at Portland Hills in 2003 ranged from $260,000 to $400,000. This compares to the average new selling price of similar housing types in metropolitan Halifax in 2003 of $211,739 for single-detached homes, $185,234 for townhouses and $204,727 for apartment condos.[6]

The project met the developer's profit expectations. The developer was not in a position to share development and construction costs.

Municipal Support

The HRM coordinated community input through a Public Participation Committee (PPC). As described in more detail in the next section, the main neighbourhood concern was that areas adjacent to existing low-density, single-family homes should have homes of similar density and type. Through an extensive and lengthy development agreement process, HRM staff was able to support the approval of the Portland Hills development proposal to Council.

FIGURE 6

Housing in Portland Hills Residential Community

Source: Clayton Developments

Barriers and Obstacles

The developer worked with the HRM, surrounding residents and the PPC to develop a successful plan. The developer achieved significant community support as a result of the process. For example, in an area adjacent to the current transit station in Phase II that would have favoured higher-density housing, consistent with a TOD approach, the HRM and developer agreed to put low-density, single-family homes, in response to PPC input requesting this type of unit where it is adjacent to existing homes of a similar type and density.

With respect to the transit station, there were no real or perceived obstacles to its planning and design. Ultimately, the developer considered the multi-year planning and negotiation process to be an obstacle. However, the developer was pleased with the outcome of the process.

Key Success Factors and Lessons Learned

The developer attributes the quality of the site plan with its mix of housing types, open space network and other uses, such as the school, commercial uses and transit, to be a key factor to their success. Clayton's familiarity with its target market as well as its ability to tune into surrounding residents' concerns during the master planning process, were recognized as contributors to a successful project.

[6] CMHC, Atlantic Market Analysis Centre, Halifax and Nova Scotia Association of Realtors.

MUNICIPAL PLANNER'S PERSPECTIVE

Planning Objectives

With respect to transportation and ensuring transit-supportive development, the HRM had few objectives for this project. At a high level, the Municipal Planning Strategy for Dartmouth transportation objectives are to provide an efficient transportation network incorporating roads, mass transit and pedestrian accessibility for the orderly, efficient and safe movement of people and goods.

Following the decision to develop a transit station within the Portland Hills community, negotiations with the developer related to ensuring adequate pedestrian connections and encouraging greater density closer to the transit station.

Planning objectives for this site were more related to ensuring the development was responsive and sensitive to the surrounding built-area context and that impact to the watershed was minimized. Specifically, the street pattern and lot plan of the development were to respect, to the greatest extent possible, the sensitivity of the site in terms of preservation of vegetation, avoidance of steep slopes, and minimizing impacts to Bell Run and Morris and Russell Lakes.

FIGURE 7

One portion of the undeveloped Phase II site that was closest to the now-developed transit node would have been ideal for higher-density residential development, but this area backed onto low-density, single-family units. Community concern resulted in single-family development for these sites.

Source: Clayton Developments

At a broader scale, through the Municipal Planning Strategy for Dartmouth, the HRM has designated large vacant parcels inside the Dartmouth area as Comprehensive Development Districts (CDD).[7] The CDD mechanism permits a land owner and the City to negotiate development standards for a property, allowing for more flexibility than offered by zoning and subdivision regulation. An important objective in providing for CDDs is to better ensure mixed residential developments with variety in dwelling type, building design and lot characteristics.

Municipal Process and Support for Project

As part of the Comprehensive Development District zoning in place for the site, the developer and HRM were required to work through a negotiating process for Development Agreements approved by HRM council. The process articulated binding conditions of development related to housing density, mix, land uses including parklands, buffers and amenities, developer contributions, servicing plans, and development phasing.

Public Consultation Process

In 1999, Halifax Regional Council approved a series of amendments to the Municipal Planning Strategies (MPS) of Dartmouth (and other nearby communities) to provide policy guidance for future development within the Morris–Russell Lake area. The amendments called for the creation of a Public Participation Committee (PPC) to prepare a master development plan for the total area and to develop a concept plan for Clayton's site east of Morris Lake. In that same year, the PPC worked to prepare these plans and in the spring of 2000, HRM Council was presented with the *Portland Hills Concept Plan.*

[7] *Municipal Planning Strategy for Dartmouth,* August 2006, p. 36.

Challenges

Community concerns for the project were more related to suitability of development as it interfaced with existing residential areas. For instance, it was preferred by the PPC to have single-family units backing onto single-family units. This concern was considered more important than ensuring transit-supportive development for one area of the Phase II plan. One portion of the undeveloped Phase II site that was closest to the now developed transit node would have been ideal for higher-density residential development, but this area also backed onto low-density, single-family units. The eventual agreement was to place single-family units in this location.

Success Factors

The proposal was consistent and responsive to existing and approved development within this area. A variety of housing types and a mix of land uses are consistent with the HRM's priorities for large greenfield sites such as the Portland Hills project. Considering that the transit station was sited and planned after Phase I development of the mixed-use residential community, it is very fortunate that the developer had already sited higher-density development closer to the existing and planned local bus corridors. Lastly, the community does provide pedestrian linkages to the transit node.

RESIDENTS' PERSPECTIVE

For the resident survey results, it is important to recall that the BRT transit station was constructed after Phase I of the development of Portland Hills. Surveyed residents were not asked to distinguish if the transit facilities were in place at the time of their occupancy. However, local transit service (as opposed to BRT transit) was in place at the time of commencement and completion of the early phases of this project.

Eighteen residents were interviewed in 2007. While the sample size is considered statistically insignificant, the results provide some indication of residents' transportation preferences and reasons for choosing to live in this community.

Reason for Choosing that Location

Architectural features of homes were the main reason for eight of the 18 residents purchasing in this location; proximity to amenities was the main reason for four residents. All other responses were shared equally between proximity to work, schools and the cost and size of the homes.

When asked to identify other aspects of the project that influenced their purchase choice, only three residents' identified proximity to transit as a key decision for locating in this community. Overall, respondents were very satisfied with the quality of the project. Most reported being satisfied or somewhat satisfied with the amount of parking provided for their personal use, the parking provided for visitor use, the character of the neighbourhood and the cost and size of their homes.

Most respondents were satisfied or somewhat satisfied with the amenities in the neighbourhood, such as shopping, services, schools and recreation. Fifteen of the 18 residents were very or somewhat satisfied with the overall cost of living in this location even though for 11 of 18, the unit price was higher than that of their previous dwelling. A higher price was generally accepted by these respondents mostly because of the quality and character of the homes; three identified proximity to transit as a contributor to their willingness to pay more for the home.

Travel to Work, Shopping and School

Of the 11 residents still working full-time, three said they take transit to work, one walks, five drive alone and two carpool. All respondents drove alone or with others for shopping. For five respondents, travel choices have changed since moving to this location; three took transit to work, one took transit more often than at their previous home location and one walked more.

Summary and Lessons Learned

The developer attributes the quality of the site plan with its mix of housing types, open space network and other uses such as the school, commercial uses and transit to be a key factor in the success. The site plan was very responsive to environmental conditions, surrounding neighbourhoods and provided a variety of housing types and a mix of land uses that are consistent with the HRM's priorities for large greenfield sites.

Considering that the transit station was sited and planned after Phase I development of the mixed-use residential community, it is very fortunate that the developer had already sited higher-density development closer to the existing and planned local bus corridors. Lastly, the community does provide pedestrian linkages to the transit node.

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