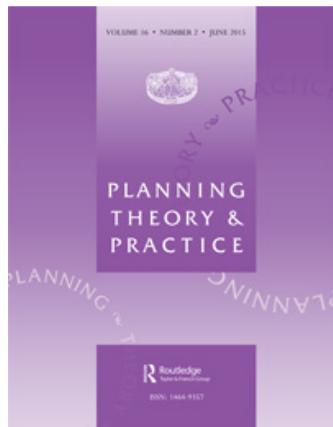


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Publisher: Routledge

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## Planning Theory & Practice

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/rptp20>

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Published online: 27 Feb 2015.



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To cite this article: Kirk Brewer & Jill L Grant (2015) Seeking density and mix in the suburbs: challenges for mid-sized cities, *Planning Theory & Practice*, 16:2, 151-168, DOI: [10.1080/14649357.2015.1011216](https://doi.org/10.1080/14649357.2015.1011216)

To link to this article: <http://dx.doi.org/10.1080/14649357.2015.1011216>

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## Seeking density and mix in the suburbs: challenges for mid-sized cities

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*(Received 4 August 2014; accepted 16 January 2015)*

Examining patterns in suburban density and mix in a mid-sized Canadian city illustrates the challenges of trying to achieve planning targets for urban intensification and mixed use in mid-sized cities with relatively slow rates of growth. A mixed methods study documents trends in Halifax over a 50-year period. Although planning theory and policy often promote growth nodes and corridors, the case study illustrates the ways in which market forces, conflicting regulations, demographic shifts, and local conditions may undermine efforts to increase densities and generate fine-grained mixing of uses and housing types in suburban areas.

**Keywords:** density; mixed use; suburbs; mid-sized cities; Canada

### Introduction

For decades, critics have called the suburbs sterile, boring, and isolating (Duany, Plater-Zyberk, & Speck, 2000; Jacobs, 1961; Krier, 2009). Many urbanists and planners have described them as sprawling and inefficient (Bruegmann, 2005; Fishman, 1989). Recently, however, scholars such as Fishman (2005) and Nelson (2013) have argued that North American suburbs are restructuring, with the potential to become more urban in their characteristics. Modern suburban community plans increasingly promote mixed use, walkability, and sustainability (Grant & Bohdanow, 2008; Jepson and Edwards 2010). New urbanism and smart growth – with their emphasis on higher densities, mixed use, and compact form – have become key theories underlying contemporary planning practice (Grant, 2006; Moore, 2013). As community studies indicate, however, planning practice differs widely, and the extent to which planners and developers achieve principles of increasing residential density, mixing housing types and mixing uses in new suburban development is far from uniform. The research reported here reviews experience in a mid-sized city, following patterns in density and land use mix over the period from the 1950s to the 2010s. We evaluate the extent to which recent suburban development practices and outcomes achieve contemporary aims of intensification and mix. Although policies generally support compact form and fine-grained mix in the community studied, suburban development practices remain remarkably resilient. The case study provides useful theoretical insights into the factors that limit the potential for practitioners to achieve contemporary planning objectives.

Sprawl has been an issue for planners since the early days of modern town planning (Bruegmann, 2005; Creese, 1966). Jacobs (1961) argued that density and mixed use supported urban diversity and vitality. By the 1970s European planners increasingly advocated compact form and integrated land use (Jenks, Burton, & Williams, 1996). The rise of new urbanism and smart growth in the 1990s provided planners and policy-makers with arguments that density and mix could improve land use efficiencies, urban qualities, and opportunities for social interaction (Duany et al., 2000; Ewing, 1996; Talen, 2008). Some recent studies (Skaburskis, 2006; Song, 2005)

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suggested that by the end of the twentieth century suburban lot sizes began to decline and densities rose modestly.

Beginning in the 1970s in Canada, planners in Toronto and Vancouver actively promoted urban intensification in redevelopment areas, seeking to increase densities and land use mix (Isin & Tomalty, 1993; Punter, 2003; Searle & Filion, 2011). During the 1990s provincial and local governments in several parts of the country became proponents of new urbanism, adapting policies and practices to promote its precepts of higher densities, mixed housing types, mixed uses, and transportation alternatives (Grant, 2003). In Markham (Ontario), for instance, local planners revised regulations to institutionalise new urbanism and smart growth principles; as a result, Gordon and Vipond (2005) noted that the mean gross density in new suburbs – 19.5 units/ha – was 76% higher than found in earlier conventional suburbs in the area.

Research on suburban development in mid-sized cities remains limited (Bunting, 2004; Cuthbert & Anderson, 2002; Millward, 2002). Because their economic dynamics and political character differ from those of fast-growing metropolises, smaller cities may prove less receptive to changes in policy and development practice (Bunting, Filion, Hoernig, Seasons, & Lederer, 2007). Moreover, although suburban practices have been well documented for fast growing urban districts such as Toronto, Vancouver, and Calgary, less is known about the experience of smaller cities in slow growth regions (Bunting, Filion, & Priston, 2002; Grant, 2009; Langlois, 2010).

So, to what extent have smaller cities been successful in increasing suburban densities, and what challenges do they face in achieving intensification and mix objectives?

In this article we examine the history of land use development in suburban districts of a relatively remote mid-sized city to determine the extent to which urban densities and land use and housing mix changed over the post-war period. Our case study focuses on suburbs in Dartmouth, a residential community in Halifax Regional Municipality (HRM or Halifax), in eastern Canada. Halifax covers a large geographic area and features a range of urban, suburban, village, and exurban development (Figure 1). The largest city and major port on Canada's east coast, Halifax is the economic hub of Atlantic Canada. By contrast with most Canadian cities, Halifax's population is growing slowly: 0.44% annually, well below the national average of 1.16% and about one-tenth that of Calgary's high of 4.26% (Statistics Canada, 2014). As a former city in its own right (prior to amalgamation with Halifax, Bedford and Halifax County in 1996), Dartmouth has a development history of suburban growth over two centuries. We examine densities and land use mix in representative post-war suburbs, focusing especially on understanding the extent to which newer suburban areas may show evidence of increasing density and land use mix as actively promoted by plans and planners. Analysis of four typical suburbs built in Dartmouth during the last 50 years reveals the challenges of changing engrained suburban patterns even in the context of generally supportive policies and practitioners. We begin by describing the case study before considering some of the implications of our findings for theory and practice. We conclude by identifying key barriers to transforming planning practice.

### **A suburban case study**

Using a mixed-methods approach, we sought to determine whether new development on the fringe of Halifax provided indications of increasing densities and fine-grained land use mix, as promoted by contemporary planning theory and local policies. Between 2011 and 2013 we reviewed policies and plans, interviewed various stakeholders,<sup>1</sup> completed field surveys in suburban areas, examined census data, and analysed densities and land use patterns using GIS tools. The results provide useful insights into current trends shaping the way suburbs develop in Halifax. They help to clarify the significant challenges that planners and developers encounter in trying to implement key principles driving contemporary community design theory.

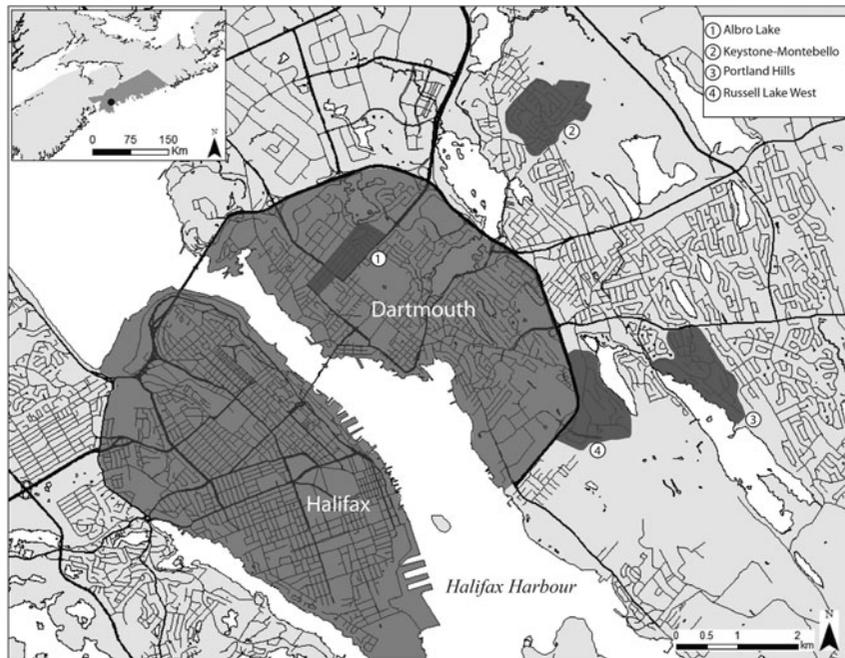


Figure 1. Halifax Regional Municipality showing the Dartmouth study areas. (Source data: HRM (Halifax Regional Municipality), 2012a).

Following methods suggested by Forsyth (2003) and Campoli and MacLean (2007) we evaluated net and gross dwelling unit density per hectare to provide estimates for comparing representative suburban areas built in different periods. We analysed parcel data from the Nova Scotia Civic Address Database and the HRM Geographic Information Systems and Services Group using ArcMap software to calculate lot sizes and dwelling unit densities in Dartmouth neighbourhoods.<sup>2</sup> We aligned study area boundaries with neighbourhood master plans. Where such plans were not available, boundaries chosen included major arterial roads or open spaces developed as public parkland. For each study area we classified developed parcels by residential, commercial, recreational, and institutional land uses. We categorised residential lots based on single-detached, attached, and multi-unit housing types to assess the total number of dwelling units in each study area. To determine net density, we divided the area of all residential parcels by the total number of units within the study area. We calculated gross density by dividing the number of residential units into total developable land, including land developed for commercial and institutional uses, roads, and open space (excluding lakes and major waterways). The calculations provided net and gross densities for each suburban area studied.

Data retrieved from Statistics Canada (2013) for census years 1971–2011 provided demographic trends in population densities and household size. Relying on census data to calculate densities proves problematic in an area as large and fragmented as Halifax Regional Municipality (HRM) (Cuthbert & Anderson, 2002). In HRM, census geographies often contain large expanses of non-residential uses including lakes, industrial parks, and military land. While census data proves useful for identifying household and demographic trends, using dissemination area<sup>3</sup> data to calculate gross population density in fringe areas generally leads to misleadingly low estimates for comparing densities across developments. We therefore used 2011

dissemination block data: these exclude undeveloped and undevelopable areas. When combined with population data the block geography produces useful calculations of the densities of developed areas.

### **Development in Dartmouth**

The Province of Nova Scotia created Halifax Regional Municipality in 1996 by amalgamating the former cities of Halifax and Dartmouth with the town of Bedford and rural Halifax County. HRM covers approximately 5500 km<sup>2</sup>. With a population of about 390,000 (Statistics Canada, 2012), HRM has a low overall density, scattered in clusters of suburban development and rural villages outside the main urban area (Millward, 2002).

Housing development primarily focused on the Halifax Peninsula and Mainland Halifax until the early post-war years. Until then, development in Dartmouth remained concentrated near downtown, linked to Halifax across the harbour by ferry. The opening of the Angus L. Macdonald Bridge in 1955 allowed development to spread quickly in Dartmouth and Halifax County's eastern regions. Between 1970 and 1996, Dartmouth expanded into rural areas at a higher rate than seen in other parts of HRM (Cuthbert & Anderson, 2002). During the same period, residential and household densities plummeted throughout the region, mirroring national trends (Bunting, 2004; Bunting et al., 2002). Segregated land use patterns became the norm.

Managing regional growth is not a new concern. Nova Scotia's 1969 Provincial Planning Act and the 1975 Halifax-Dartmouth Regional Development Plan sought to curb sprawling growth patterns and establish a regional planning structure, but it was met with limited success (Grant, 1989; Millward, 2002). The City of Dartmouth adopted a development boundary to contain growth within serviced areas and to limit suburbanisation of its fringe. At one time, the Nova Scotia Housing Commission (later the provincial Department of Housing) owned large areas within the development boundary. NS Housing developed several Dartmouth area neighbourhoods between 1960 and 1990, before the government privatised its remaining holdings. In 1983, Dartmouth city council agreed to a private developer's request to build a large suburban project at Portland Estates, effectively eliminating the development boundary. Thereafter, developers paid for extending infrastructure and suburbanisation proceeded apace.

By the time of municipal amalgamation, many in the region saw Dartmouth largely as a residential suburb of Halifax, albeit with significant industrial employment centres. The 2006 Regional Municipal Planning Strategy, HRM's guiding policy document, acknowledged the environmental and financial concerns associated with historical development patterns and sought to guide development towards compact, mixed-use growth centres (see [Box 1](#)).

In many ways Halifax's planning policy reflects the new urbanism and smart growth agenda that increasingly dominates contemporary practice. HRM uses a service boundary to establish which areas will receive municipal services such as public transit, water, and sewerage. As one planner (P10) we interviewed explained, adopting a more urbanised development pattern will capitalise on existing services and infrastructure while reducing costs.

I think that number one is that it's a serviceable boundary. I mean, HRM made a very strategic decision back in 2006–7 to draw a line to do two things, which was to control growth and for all the infrastructure, cost, financial reasons, and then to try to fill in the area on the other side of the line. So before you are coming in and getting leap frog, haphazard, ribbon development, let's build up the core.

Although planners had been concerned about sprawl for decades, the Regional Plan committed to compact form and mix. Yet, as some planners interviewed acknowledged, many development projects were approved in 2005 immediately before the Plan came into effect. As one planner (P15) noted:

**Box 1: Regional Planning Strategy**

“These [growth] centres will be designed through Community Visioning and secondary plan review processes as mixed-used transit-oriented communities, to accommodate a mix of housing types, office, retail and institutional uses in addition to parks, trails, community gardens and safe public open spaces. . . .

The community centre and surrounding neighbourhoods will be serviced with an interconnected system of streets, pathways, sidewalks, and bicycle lanes where appropriate. Buildings within the centre will have varied architectural facades which will frame the street and have direct connection to the public sidewalk and street. The ground floor of buildings within the core of a centre that front on corridors and public facilities will be developed with commercial uses such as shops, restaurants and cafes with large windows that add visual interest for pedestrians and provide shelter in the form of awnings, structured colonnades or street trees. Adequate short-term parking will be provided to service these retail areas, without compromising pedestrian access from the sidewalk.” (HRM (Halifax Regional Municipality), 2006, p. 45)

I know the Regional Plan tried to curb that [sprawl] somewhat. But we had so many applications in that were “grandfathered” – that were in prior to the Regional Plan – that we’re just proceeding with those.

The large number of pre-approved projects reflects the lag between what planning policies encourage and what is already in permitting and construction phases. To reduce costly sprawl, HRM established growth targets it hoped to achieve within the plan’s 25-year lifespan. The plan aimed to limit suburban development to 50% of total growth, with 25% development directed to the urban core (previously developed areas in Halifax and Dartmouth), and the remaining 25% to rural development. The first post-plan report on growth, however, reported that 56% of recent development went to the suburban fringe while urban core development accounted for a mere 16% of new construction (HRM (Halifax Regional Municipality), 2012b). Meeting plan targets may prove challenging in the short and long term.

The Regional Plan acknowledged that most new suburban housing will remain low-density (HRM (Halifax Regional Municipality), 2006, p. 8), but advocated medium-to-high density development near transit stops and major arteries. It suggested that density levels should taper off into low-density housing located in conventional residential neighbourhoods away from high-density nodes.

Secondary planning strategies guide development policies in new suburban areas in HRM to provide a regulatory framework for specific areas. Conventional zoning has become less commonly deployed for new development areas since the 1990s. Municipal policy enables master-planned comprehensive development districts (CDDs) produced via negotiated development agreements. CDDs encourage mixed land uses and housing types through secondary plan policies while leaving the particulars of built form to the developer. A planner (P7) explained:

In doing this approach that we’ve done with most of the suburban development recently, it’s sort of a balance. The developer gets more density through the multis and through the commercial, but they are also providing these other services. And we’re planning for it from the beginning.

Producing master plans before construction begins provides clarity for the developer and the municipality while shaping future growth. The strategy allows developers to optimise their investments and integrate uses while capitalising on municipal infrastructure and services.

**Density and land use mix**

Contemporary theorists such as Nelson (2013) and Duany et al. (2000) forecast a return to urban living with a popular desire for more urbanised suburbs. The growth in demand for central city

housing suggests that residents of larger cities who need to “drive until they qualify” for affordable mortgages may be willing to accept smaller properties and higher densities to keep housing costs lower and reduce their commuting times. In HRM, however, suburban residents may have few reasons to alter their behaviours or demands for spacious lots. Commuting times in HRM remain below the national average, and while housing costs are rising, homes remain more affordable in suburban areas than in the urban core (CMHC (Canada Mortgage and Housing Corporation), 2013). For the price of a modest home on a small lot on the Halifax Peninsula, homebuyers can typically purchase a new home more than twice the size on the Dartmouth fringe.<sup>4</sup> In a context where large homes and lots remain appealing and reasonably affordable for homebuyers within an easy commute of the city centre, suburban residents experience little incentive to seek more compact neighbourhoods that diminish the sense of privacy they enjoy in the suburbs.

One major hurdle to creating denser, mixed-use neighbourhoods is the negative connotation that density may carry. Planners often promoted density as the best way to increase services such as public transit, which require certain population levels to support. However, some respondents we interviewed cautioned that if development focuses solely on housing, rather than community building, the result may be isolated apartment blocks which do not provide the benefits associated with increased density. Residents and planners remained reluctant to abandon conventional low-density suburbs. One planner (P12) argued against increased population and housing density as goals in themselves:

There are places where there’s dense development as in [suburb X] where you just feel that in 20 years’ time, it’s going to be a slum. And that comes down to construction quality, plus just the density. It’s people warehousing.

The same planner indicated that residents had mixed feelings about density.

There has certainly been reluctance to accept densification . . . but at the same time, people do . . . want more density. Because they want better services . . . They don’t want the schools to close. They want more transit. They want the things that go with density, but not the other side of it, which is more people.

Examining suburban developments built in Dartmouth between 1950 and 2010 indicates changing patterns in density and land use mix. For illustration we present four representative neighbourhoods from different periods. The Albro Lake neighbourhood (Figure 2), located near the bridge crossings to Halifax, was one of the first post-war suburbs to develop in Dartmouth. The earliest blocks in the southwest, built in the 1950s, featured modest bungalows on small lots in the 370–465 m<sup>2</sup> range. As development spread northward during the early 1960s, lot sizes increased to 560–650 m<sup>2</sup> to accommodate the needs and means of a growing middle class. Neighbourhoods of the era generally followed land use patterns that placed commercial and small multi-unit developments along arterial roads at the edge of the area, with single-detached residential areas lining tight street grids. Population densities in the neighbourhood declined over time as household sizes decreased. The neighbourhood has access to several bus routes to downtown, to suburban shopping malls, and to Burnside Industrial Park. A small commercial strip mall located in the area since its inception has changed uses over time; it no longer provides local grocery or other services that were available in the suburb’s early days.

By the 1980s and 1990s, when developers built the Keystone Village and Montebello neighbourhoods (Figure 3), they expected residents to travel by car. These areas are outside the Circumferential Highway which partly delineates the Regional Centre. Though two collector routes run through it, most of Keystone-Montebello is far from major commercial areas. Bus routes are limited and service less frequent than for Albro Lake. Developers designed curvilinear streets and cul-de-sacs to calm traffic and enhance property values. Lot sizes cluster in two ranges. Lots in some areas are 465 to 560 m<sup>2</sup>, but a few streets feature higher end housing on lots of 1200 or 1300 m<sup>2</sup>: the overall lot average is about 835 m<sup>2</sup>. A small proportion of homes in Keystone-Montebello are in

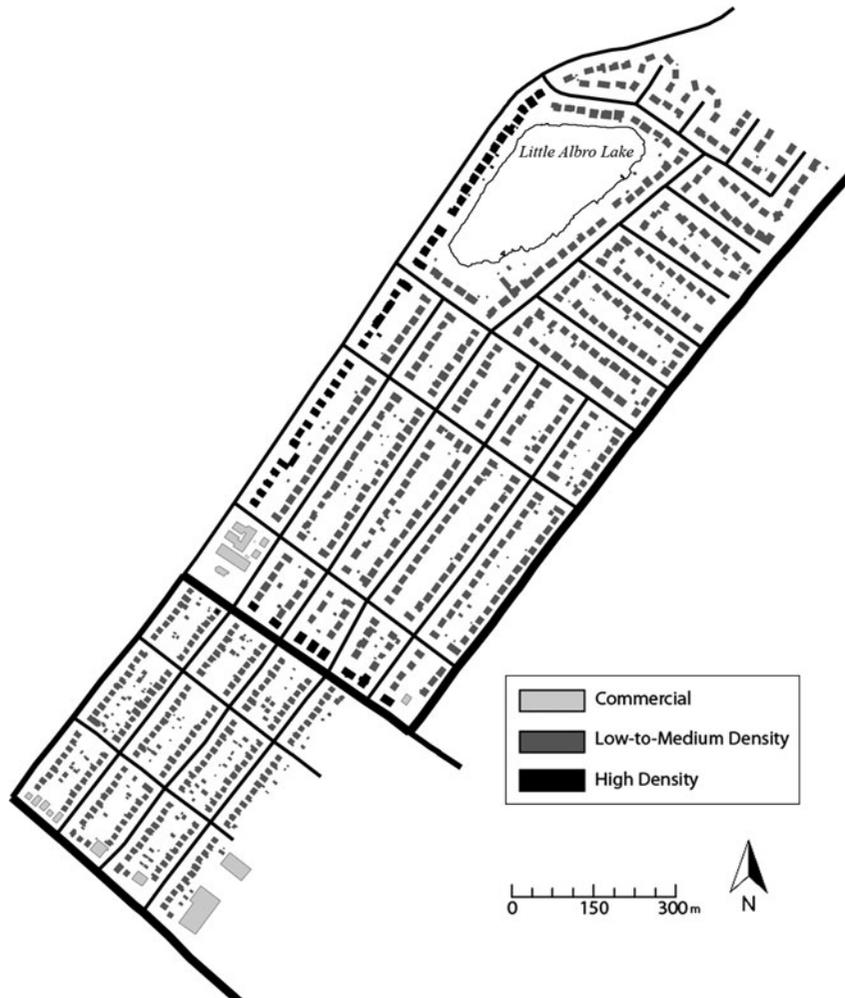


Figure 2. The Albro Lake area, built in the 1950s and 1960s, features relatively small lots on grid streets. (Source: authors).

multi-unit buildings: apartment buildings are located on collector streets. The two commercial uses in the suburb during the field survey in 2013 were a pet groomer and a pizza parlour.

By the 1970s and 1980s the cul-de-sac had become a suburban staple, valued for its quiet and privacy. In Dartmouth cul-de-sacs frequently segregate types of housing. In many high-end suburban areas, cul-de-sacs have detached houses on large lots. In some 1990s suburbs, however, cul-de-sacs featured clusters of attached units: semi-detached or row housing. Planners with the City of Dartmouth and with Nova Scotia Housing encouraged multi-unit housing on cul-de-sacs in the late 1980s and the 1990s as a strategy to increase densities and improve the market appeal of attached units. Clustering attached units near multi-unit buildings and placing them along short, dead-end streets rather than on collector routes, also made particular housing types less visible to more affluent property owners. It did not, however, redress patterns of social segregation. Instances where private developers mixed housing types on the same street prove rare in Dartmouth.

Portland Hills (Figure 4), developed in the 1990s and 2000s, is one of Dartmouth's most affluent neighbourhoods. Developers originally designed a primarily low-density suburb. During

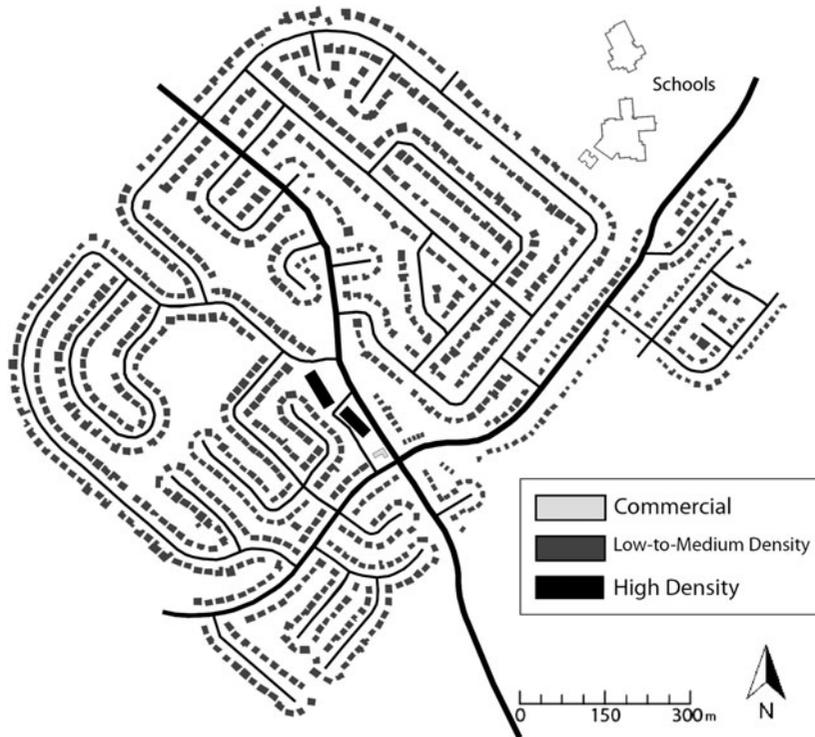


Figure 3. Keystone-Montebello, built largely in the 1980s and 1990s, features low density residential development with few other uses. (Source: authors).

the first phase of development, however, HRM approached the developer with the proposition of making a transit-oriented community. HRM's concept included a high ratio of multi-unit housing units located near a new bus rapid transit station at the edge of the community. Though the developer agreed, homeowners in the neighbourhood balked at the large number of multi-unit buildings proposed (CMHC (Canada Mortgage and Housing Corporation), 2009). The resulting compromise produced fewer four-storey apartment and condominium buildings tucked behind lower density housing with dedicated rights-of-way for long private driveways. Swathes of trees and open space separate multi-unit buildings from the rest of the development to limit the visual impact of increased density. The developer thus appealed to a range of housing markets while retaining the appearance of a low-density, single-detached neighbourhood. Lot sizes of detached homes in Portland Hills range from 560 to 1860 m<sup>2</sup>, with an average of about 890 m<sup>2</sup>. A small cluster of retail outlets near the express bus terminal included a dry cleaner, licensed restaurant, and dental office in 2013.

Russell Lake West (Figure 5), still under construction in 2013, was planned as a comprehensive development district connected to a new interchange on the Circumferential Highway. When completed, the area will include about 1200 dwelling units in a mix of detached, attached, and apartment buildings: the maximum population envisioned is 3235 (as of 2009 amendments to the agreement). Streets generally accommodate specific housing types. The townhouses group around a single cul-de-sac. Large detached homes line the lake. The smallest lots for townhouses are around 465 m<sup>2</sup>; large estate lots along the lake top out at 2040 m<sup>2</sup>. The average lot is about 835 m<sup>2</sup>. A robust and busy cluster of big-box commercial structures with hectares of surface parking straddles the

highway interchange. In 2013, several apartment buildings were under construction near the commercial core. Patches of open space designated for trails separate types of housing and land use. Because policy caps the number of units the developer can build on the site, approximately 25 to 30% of the site could be left as open space.

In suburbs built in Dartmouth, net and gross housing unit densities dropped in the 1970s before increasing through the years (Table 1). Whereas Keystone-Montebello had about 15.3 units/ha net density, Russell Lake West will have 31.6 units/ha net on completion. Albro Lake, the earliest post-war suburb, had higher densities than any of the others except for the current project at Russell Lake West. As Table 1 also indicates, though, dwelling unit density is a poor predictor of population density. Albro Lake, with its small number of alternative land uses, small building lots, and less costly housing has a higher population density than the other areas. Portland Hills, with its admixture of apartments and large houses, comes next. Since Russell Lake West is not yet completed, its ultimate population density is not easy to predict; however, its large number of relatively small apartment units, significant areas of commercial development, and substantial amount of open space will likely keep it well below Albro Lake's population density.

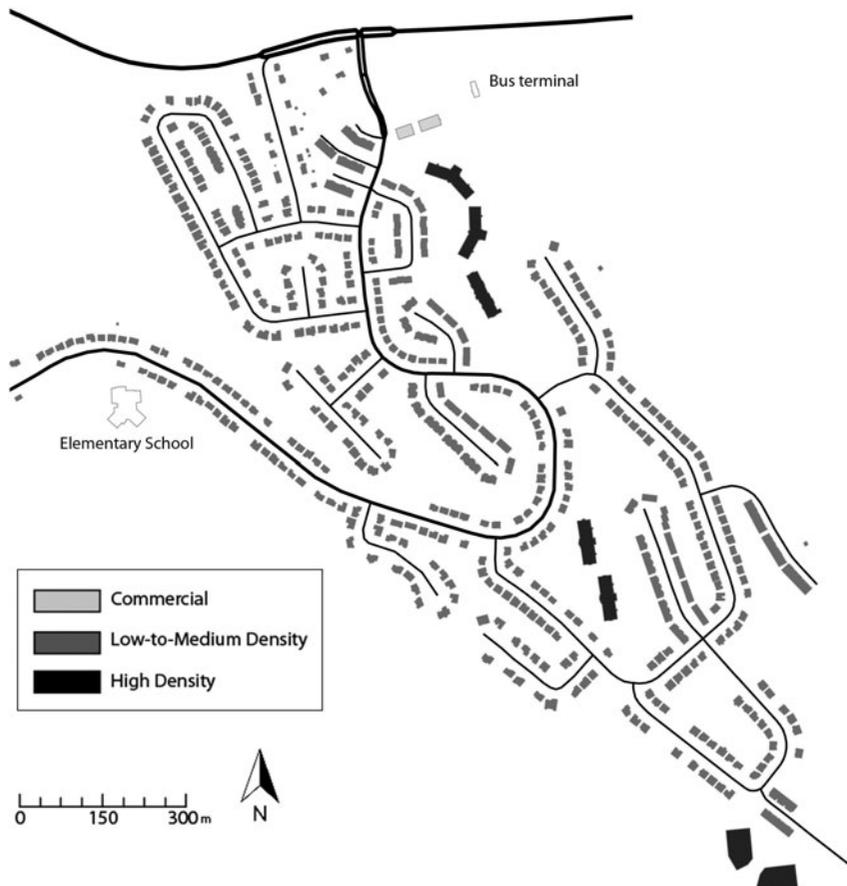


Figure 4. Portland Hills includes large lot detached homes on curvilinear streets with apartment structures tucked in behind. The bus terminal is at the north where the collector road intersects an arterial. (Source: authors).

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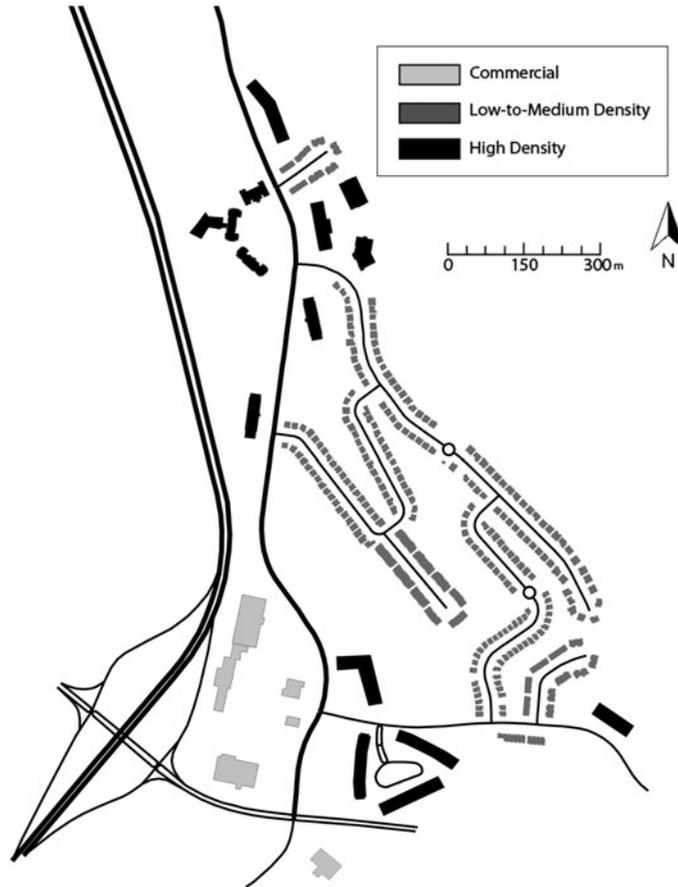


Figure 5. Russell Lake West was planned as a mixed use node around a highway interchange. (Source: authors).

### Explaining the patterns

The growing demand for low-maintenance compact housing is changing the proportion of condominiums and apartments included in HRM's suburban housing mix. In the immediate post-war period developers built large numbers of detached homes. By the 1970s semi-detached units and townhouses became increasingly common. By the 1990s condominium apartments were standard in major suburban developments. As envisioned in Canadian planning policy, a mix of housing types offers the opportunity to develop "complete communities" with accommodations for a range of incomes, needs, and household types (Grant & Scott, 2012).

As experience shows, however, mixing housing types is not easy in many markets. Developers in Halifax are keenly aware that owners of single-detached homes prefer distance from denser housing clusters. Developers find themselves caught between planning policy promoting mixed housing and higher densities and homebuyers who continue to be concerned about housing values and the potential implications of mixing types of households (Perrin & Grant, 2014). Suburban residents may reluctantly accept higher housing densities in their neighbourhoods but remain resistant to an integrated urban structure that blends various densities, housing types, and land uses. One resident (R14) explained:

Table 1. Comparing densities across four Dartmouth suburbs.

	Albro Lake	Keystone-Montebello	Portland Hills	Russell Lake West*
Development period	1950s–1960s	1980s–1990s	1990s–2000s	2010s
Net housing density	22.2 units/ha	15.3 units/ha	17.8 units/ha	31.6 units/ha
Gross housing density	13.8 units/ha	9.9 units/ha	10.9 units/ha	17.3 units/ha
Population density	2736/km <sup>2</sup>	668/km <sup>2</sup>	1673/km <sup>2</sup>	671/km <sup>2</sup>
Percentage multi-unit dwellings	20%	9%	42%	74%

\*Note: Estimates of population density for Russell Lake West reflect conditions in summer 2013. As the neighbourhood continues to develop, additional units will increase population counts.

Sources: (HRM (Halifax Regional Municipality), 2012a; Statistics Canada, 2012.)

I know some people don't like it. They say, well, "I've got my single-family and you put me next to a rowhouse." And they say, "Because they're less expensive homes, it brings the value of mine down." To a large extent what they've done here is put them on separate streets and they transition from one level to the next when they're looking at the cost of the houses.

Developers avoid mixing housing types on the same street for marketing and aesthetic reasons, but also because homebuyers expect visual or spatial buffers between different price points. Including a mix of housing types requires large development parcels in order to deliver a configuration that appeals to homebuyers. A developer (D25) explained:

It's got to be a large enough development because you don't mix [housing types] on the same street. Well, you can. I mean we have one street of 50-foot [15 m] lots or 38-foot [12 m] wide homes where we're mixing bungalows with two-storeys on the street, but they're still larger homes, which is speaking to a certain marketplace. But parallel to that street is the townhouses, and then perpendicular to both are those junior executives. [Mixing] just doesn't work. It would look awful.

In Halifax, the major developers are locally based companies that rarely operate in rapidly growing markets such as Toronto or Calgary. Their perspectives on urban development reflect years of experience in the region. Thus one developer (D13) we interviewed described conventional practice as locating big-box retailers and two-storey strip malls near highway access and surrounded by surface parking lots.

Anywhere that I've been to, I find them, to a degree, rather similar. You have your housing areas: you try to put your large, higher density, multi-units and whatnot closer to highways and highway access, just off the interchanges, *et cetera*. And you also try to put your commercial and that there as well. So the further away you are from the main arteries, the more residential you get. And the closer you are is usually where you'll find your cluster of commercial and high density. And I've seen that in various areas.

Although big box retail has replaced neighbourhood retail, in many ways the developer's understanding of the distribution of apartments and commercial uses along arterials and collectors on the periphery of residential areas parallels the ideology of Clarence Perry (1929) "neighborhood unit". Mixing commercial uses with residential at a fine grain is happening in inner-city urban redevelopment zones, but not in suburban Dartmouth. Some concepts that underscored post-war suburban form remain decisively resilient to change.

HRM policy recommends compact form for new suburban development, but planners lack mechanisms to require developers to shift to an urbanised pattern. The market in the Halifax region gives home purchasers many options, including downtown condominiums for those with deep pockets or willing to accept small units, exurban or rural homes on large lots a short drive from the city, suburban starter townhouses, and reasonably affordable suburban condominiums. Developers, who control the pace at which land is released for development and who understand preferences of the market, have considerable leverage in an urban region that eagerly seeks more rapid

development of the kind seen in larger cities. While they may share planners' desires to optimise development of the land, developers recognise that housing market conditions in Halifax cannot force the kind of intensification witnessed in Vancouver or Toronto. Without strong market demand, rapid population growth, and inflated land prices, planners in Halifax lack the tools that planners in larger cities – or in smaller cities within commuting distance of rapidly growing larger cities – use to push developers in the direction of mixing housing types or land uses in ways promoted by new urbanism and smart growth philosophies. Instead of enjoying compact neighbourhoods, walkable streets and human-scaled local retail, suburban areas in HRM – as in many smaller cities – come up short (Grant, 2009; Langlois, 2010).

Policies in the regional plan may promote density and mix, but developments must conform to other regulations, requirements, and political realities. The comprehensive development district policy in effect for Russell Lake West set total allowable gross density at 19.8 dwelling units/ha, excluding areas for commercial use, and suggested that not more than 40–50% of the units be apartments (HRM 2014). Given that the project permitted other uses as well, we might expect a more compact urban form than seen in most post-war suburbs in Dartmouth. Practice shows, however, that this particular planned development is producing a coarse-grained urban pattern with isolated pockets of housing types and land uses separated by large open areas and wide roads. Russell Lake West aptly illustrates the challenges planners face in trying to plan for density, mix, and urban amenities in suburban areas. Designed under a master plan that envisioned a node with urban qualities and mix, Russell Lake West as developed instead reflects segregated land uses, inhospitable streetscapes, and low population densities.

### **Challenges of demography and history**

The modern suburban model arose in the post-war era of growing families, rising affluence, and incentives to assist homeownership (Harris, 2004). Homes and lots in the Dartmouth suburbs were relatively small in the decades after the war, yet they housed large families. In 1971, Halifax had an average of 3.4 inhabitants per private household. By 1991, average household size in the city declined to 2.6, and by 2011 to 2.3 (Statistics Canada, 2013). With average lot sizes going up in suburban projects at the same time as household sizes declined, achieving population density targets became ever more challenging. New suburban areas reflect the difficulty of achieving density ambitions.

One strategy planners use to encourage greater densities and housing affordability is increasing the proportion of multi-family units. The form of development affects population composition and numbers. In theory, the greater the number of units permitted in an area, the lower the cost of housing, the greater the population density, and the better the potential to support mixed use. In practice, however, the municipality uses population projections that do not reflect current conditions (Table 2). To estimate population outcomes, HRM assumes 3.35 inhabitants per detached or townhouse unit, and 2.25 inhabitants per apartment: those figures made sense at one time. Census data on areas in HRM currently dominated by detached or townhouse units, however, show about 3.0 inhabitants per household; apartments in HRM contain around 2.0 inhabitants per household.<sup>5</sup> In the example Table 2 illustrates, at 20 units/ha 2400 people are likely if detached housing is built (280 fewer residents than Halifax's assumptions predict), while 1600 might be accommodated in multi-unit structures. Multi-unit structures produce higher unit densities on site, but depending on how types of units are distributed across a project, and on overall caps on the number of units, the resulting population generated in the area may vary widely. Historic policies that require staff to apply density caps on a site specifically intended for intensification undermine the potential for land use change, but reflect lingering political concerns about density while illustrating the occasional messiness of daily practice.

Table 2. Projected population on a 40-ha site at 20 units/ha, by housing type.

	Single detached and townhouse	Multi-unit building
Permitted units on site	800 units	800 units
HRM projected people per unit	3.35	2.25
HRM projected population on site	2680 people	1800 people
Actual people per household in similar areas of Halifax in 2011 census	3.0	2.0
Probable population on site, given current household sizes	2400 people	1600 people

Our efforts to identify where HRM’s projections of household size for particular housing types originated produced disparate answers. Developers pointed to HRM planners as the source. Some planners thought that private consultants or national agencies had suggested the numbers. Other planners reported that Halifax’s water utility had set the numbers to address infrastructure capacities. Staff at Halifax Water denied playing any part in fixing the standards. By 2013 it seemed that the projections about number of residents per type of housing unit had become institutionalised so that no one sought to justify or evaluate them. Not only do the numbers resist explanation, they bear little relationship to actual conditions. Household sizes continue to decline, yet standards have not been adjusted to reflect lower likely outcomes. As smaller apartment units become increasingly common in the suburban marketplace, average household sizes may continue to drop below the current average of 2.0 (Laplante, 2005; Turcotte, 2008). Using high household size projections generates overly optimistic estimates of population density for new areas, and undoubtedly disappoints those who expected more residents to arrive. The Halifax example illustrates how institutionalised standards create a legacy that may thwart policy innovation.

Applying a density cap on the number of units in a comprehensive development district can have bizarre side-effects, as a developer (D20) explained.

We’re finding that our developments are running in the order of 20 to 23 [per cent open space]. Now, that looks great, but then you’re saying, “Well, why is that?” And that’s because your density allocation at eight units per acre [20/ha] is light. And when 60% of your housing accommodation is multiple, in other words high-density, the land can support more density. So these fringe areas that are again just politically held to eight, in my opinion they should be higher than that. They should be 10. And it creates greater economies of scale, greater and better use of the infrastructure, greater transit opportunities. But there’s a political stigma and some mental block to increasing that density in those areas.

If developers erect more multi-family units to meet market demand for affordable units, then the current combination of policies force them to leave a large proportion of the site in open space. Since municipal authorities have limited interest in accepting donated parkland (due to maintenance costs for the city), developers fashion much of the open space as vegetated buffer strips separating land uses and housing types. With excess land to distribute across approved units, developers create large lots for detached houses on sites that regional planning policy has, ironically, identified as sites for urban intensification. Apartment buildings and commercial sites feature large surface parking lots and oversized roads which undermine walkability. Instead of producing a landscape that looks and feels urban, the policy perversely generates sprawling suburban nodes with large areas of empty space and parking lots. Policy conflicts undermine intensification efforts.

Planners interviewed expressed disappointment with practice. One (P12) described the distress of watching opportunities lost.

So for planners, there are big advantages to seeing new urbanism principles, densification, and all that going forward. But the developers, you know, if they don't perceive that the market is really ready for it, they just won't do it. And that means you can be way, way late in terms of opportunity for doing it . . . because the developer then fills the space they have with whatever they figure is going to work, and then that piece of land is gone.

Denser neighbourhoods have the potential to offer beneficial financial returns, but experimenting with new built forms is a risky venture for developers: it requires economic assurances that a new suburban model will sell and political willingness to experiment with innovative practices. In smaller cities with relatively slow growth the potential for changing the suburban built form depends on windows of opportunity when economic, market, and political conditions align to create the right climate for homebuyers' expectations to change. In large, rapidly growing cities, high land costs and long commute times force residents to consider living at higher densities and in mixed neighbourhoods. Even mid-sized cities like Markham, north of Toronto, enjoyed density increases in recent years (Gordon & Vipond, 2005). Cities like Halifax, far from large cities that are experiencing high rates of immigration, lack significant drivers for change. The availability of abundant land within commuting distance of the city diminishes demand for intensification. In the absence of a strong market for high density mixed housing and mixed use, developers are averse to abandoning strategic suburban practices, and political leaders hesitate to rock the boat.

Waiting for an opportune time to develop dense mixed-use suburbs presents a challenge to planners trying to encourage compact development patterns to meet 25-year regional growth targets. If developers do not see an advantage in promoting new configurations and a robust mixture of uses, new housing developments will continue to consume more land than policy advocates. Each conventional neighbourhood built contributes to ongoing problems of resource consumption and rising infrastructure costs. And each failure of practice frustrates supporters of theories that promote suburban transformation.

### **Barriers to changing practice**

In recent years planning theorists have argued that moving away from rigid land use zoning and excessive development standards would provide opportunities to create fringe areas with urban characteristics. Our case study of the Dartmouth area of Halifax shows how difficult it can be to transform suburban processes in smaller cities. Even when overall regional planning policy supports intensification and mixed use, political choices to cap density alongside housing market conditions that resist certain kinds of mixing may mean that suburban practice continues to produce segregation and low urban densities. The suburbs being built in HRM in the 2000s permit a greater mix of housing types, land uses, and lot dimensions than those built at any time since World War II. At the same time, though, the market has not produced a fine-grained mix on small lots. Enabling policy at the regional plan level is necessary, but not sufficient to overcome a legacy of archaic standards, consumer fears, and an abundance of market opportunities to live in low density segregated developments. As a planner (P19) lamented,

There was a school of thought that the suburbs were going to die off, right? All the empty-nesters, when their kids grew up, they're going to go, "What are we doing living out here?" That hasn't really happened.

Grant (2009) examined why suburban practice diverged from planning theory promoting new urbanism, smart growth, and sustainability in three Canadian communities. Calgary (Alberta), Markham (Ontario), and Surrey (British Columbia) are all in fast growing and affluent regions. In identifying the challenges, Grant (2009, p. 30) identified three significant factors: market constraints (including consumer preferences), political commitment (indicating the degree of buy-in from councils, and whether administrative structures effectively facilitated implementation), and

pressure for private-sector solutions (that contributed to larger-scale projects and negotiated development agreements). Halifax is smaller than some of the cities Grant (2009) studied, and remote from large urban centres. Its population is growing slowly and residents enjoy abundant housing opportunities within a relatively easy commute of job centres. Amalgamation left Halifax with a legacy of grand-fathered development approvals and conflicting policies. The Dartmouth case study provides additional insights into the factors that limit the application of policies of intensification and mix.

First, market pressures play a significant role in shaping outcomes. While high land costs and low availability influence densities and land use patterns in large centres with rapid growth, land costs remain relatively low in cities such as Halifax. Consumers in Halifax can exercise consumer preferences for the “Canadian dream”: a large house on a large lot. Although some consumers have shifted preferences to urban living, a substantial market segment remains interested in conventional suburban living. As long as developers find conventional developments easy to market, planners will feel pressure to approve them.

Second, political and institutional commitment to implement policy is essential. Grant (2009) noted that such commitment varied from city to city and time to time. In Halifax, council has shown weak commitment to increasing density and mix. Halifax’s unique geography contributes to urban, suburban, and rural rivalries to obtain a share of highly desired growth. With a surfeit of plans and policies, staff are stymied by policy conflicts they cannot resolve. Repeated reorganisations of planning functions since amalgamation underscore the need for more policy coordination.

Third, private sector solutions affect planners’ abilities to implement policy directions. Neoliberalism has influenced planning practice in Canada, with major developments generally negotiated between planners and developers. Developers play a critical role in developing master plans for new development areas, and prove powerful in a local context where only they can deliver growth.

Fourth, household dynamics influence efforts to increase population densities and mix. In many parts of Canada declining household sizes undermine intensification. Higher unit densities may not produce desired population densities because the number of residents declines in smaller units. Different kinds of households and consumers live in the suburbs than in the urban core: aging baby boomers may want different amenities than young professionals (Grant & Perrott, 2011). Thus the characteristics of residents affect the kinds of businesses that can thrive in mixed-use environments.

Finally, the case study illustrates the significance of legacy issues, which may be unique to communities. In Halifax residents experience little pressure to reduce commuting time: they can live within 20 km of the city centre in various environmental settings (ocean-front, woodland, or suburban) and get to work downtown in 30 minutes. Finding ways to coordinate policies and plans from cities, towns, and rural villages united together in a heterogeneous regional municipality generates significant challenges for Halifax planners.

Our case study of Halifax suggests that the potential for increasing densities and mixed use in suburban areas of mid-sized cities depends on factors often beyond the control of planning practitioners. Smaller cities within the commuter-shed of large and rapidly growing cities seem likely to experience greater intensification and mix than those far from such growth areas. Smaller cities with strong growth boundaries are likely to experience more intensification than those where residents can access alternative housing options outside the city. As long as residents are willing to live in the suburbs and commute to the centre, political leaders are likely to apply suburban standards to development, developers will build the kind of housing they can sell most quickly, and planners will keep adjusting policy and standards in an effort to urbanise the suburbs. Conventional suburban patterns will not disappear unless the complex cultural and economic forces creating them diminish. Until such changes occur, planning practice may struggle to achieve the aspirations of planning theory.

## Acknowledgements

The authors are grateful to Heidi Craswell and Leah Perrin for assistance in collecting data for the study.

## Disclosure statement

No potential conflict of interest was reported by the authors.

## Funding

The research was supported by the Social Sciences and Humanities Research Council of Canada under two grants: Trends in the suburbs (Principal Investigator (PI), Jill Grant, Dalhousie University; grant number 410-2009-4); Global suburbanisms: governance, land, and infrastructure in the twenty-first century (PI, Roger Keil, York University, Toronto, Major Collaborative Research Initiatives – grant number 412-2010-1003).

## Notes

1. In 2011 we interviewed six municipal councillors, four developers, 12 planners, and four residents. In 2012 we interviewed a further 17 residents. Interviews were conducted in person and took from 45 to 90 minutes. We recorded and transcribed interviews for thematic analysis.
2. We used data provided by HRM (Halifax Regional Municipality) (2012a) and the Province of Nova Scotia 2012 under license to Dalhousie University. For detailed neighbourhood analyses and study area boundaries, visit <http://theoryandpractice.planning.dal.ca/suburbs/index.html>
3. Statistics Canada reports census data at different scales. The dissemination block is the smallest geography for which Statistics Canada releases information: it is bounded by roads or standard geographic features. The dissemination area includes several blocks and typically contains 400 to 700 inhabitants.
4. In fall 2013 a quick survey of single detached homes for sale on a national real estate service ([www.mls.ca](http://www.mls.ca)) showed that houses in the C\$400,000–500,000 price range on the Peninsula were typically more than 50 years old, sat on lots generally smaller than 465 m<sup>2</sup>, and ranged in size from 120 to 185 m<sup>2</sup>. By contrast, houses in the same price range in Russell Lake West in suburban Dartmouth were built within the last five years, had lots in the 740 m<sup>2</sup> range, and were commonly larger than 275 m<sup>2</sup>. In other words, suburban buyers could get substantially newer and larger homes for the same price.
5. While average household size varies by neighbourhood, we noted that dissemination areas that include mostly apartments generally had 1.8 to 2.1 people per household. Dissemination areas of older single detached homes generally had 2.0 to 2.5 people per household; newer suburban areas had between 2.6 to 3.1 people per household.

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