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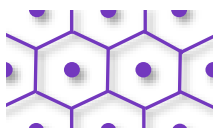
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16 February 2021

Mr. Kevin Neatt
Vice President, Planning & Development
Clayton Developments Limited
255 Lacewood Drive, Suite 100C
Halifax NS B3M 4G2

Dear Mr. Neatt:

**Re: Examining Potential Impacts of a Land Use Bylaw Text Amendment
– Carriagewood Estates, Beaver Bank, NS**

Clayton Developments made an application for a text amendment to the Beaver Bank, Hammonds Plains and Upper Sackville Land Use Bylaw, proposing to reduce minimum frontage and area requirements for serviced lots under the R-1 zone. Following a Team Review of the application, HRM staff expressed concerns about potential impacts to neighbourhood character and traffic flow if the proposed changes give rise to further subdivision and redevelopment of areas built out under the current R-1 zone standards.

This letter of opinion provides an analysis of land economics in this area to evaluate the likeliness of these redevelopment scenarios and thereby assist staff in further evaluating these potential impacts.

SUMMARY

- For the potential issues identified by HRM to materialise, property redevelopment activity arising from the reduction in lot requirements must be widespread. Under current market conditions, this is exceedingly unlikely as even lower priced properties are worth more in their current state than the sale proceeds that would result from the building lots they could be developed into. There is no general level of economic feasibility in the area that would drive this activity.
- We have identified a small number of instances where further subdivision may be expected, indeed some has occurred under current market conditions and regulations. However, the scale of this activity is extremely limited in context.
- The hypothetical market conditions required to create a general level of feasibility are virtually impossible. It would require price premiums between new construction and existing housing that defy the function of real estate markets, and are an order of magnitude higher than what has been observed in the area over the past decade.
- Overall, though the amendment does raise the maximum theoretical density of the zone, the scale of this incremental increase is not sufficient enough to spur redevelopment at scale.

BACKGROUND

On October 27, 2020 Clayton Developments made an application for a text amendment to the Beaver Bank, Hammonds Plains and Upper Sackville Land Use Bylaw, proposing to change the following minimum requirements for serviced lots under the R-1 zone:

- reduce the minimum lot frontage to 40ft (currently 60ft), and
- reduce the minimum lot area to 4,000ft² (currently 6,000ft²).

This application arises in the context of Clayton’s Carriagewood Estates subdivision, and a desire to develop portions of the remaining project area under these smaller standards, which is itself a response to increasing construction costs and changing suburban market preferences.

Halifax Regional Municipality staff provided a Team Review of the application, dated January 18, 2021. As this text amendment would alter lot standards for all areas subject to the R-1 zone, and not just the Carriagewood Estates project area, staff have correctly considered the potential implications of the application for areas beyond the immediate project site.

Of relevance to this letter, HRM staff noted that the reduction in lot frontage creates a mathematical possibility for existing lots to be further subdivided: either in and of themselves, or with minimal consolidation efforts (e.g. two 60ft lots redeveloped as three 40ft lots, or one 80ft lot into two 40ft lots). This increases the potential maximum dwelling density of lands zoned R-1. Of principal concern is the potential for negative traffic impacts in the Beaverbank Road corridor if widespread redevelopment of existing areas to the 40ft standard were to occur, though discussion of potential impacts to existing residential character was also included.

SUBJECT SITE

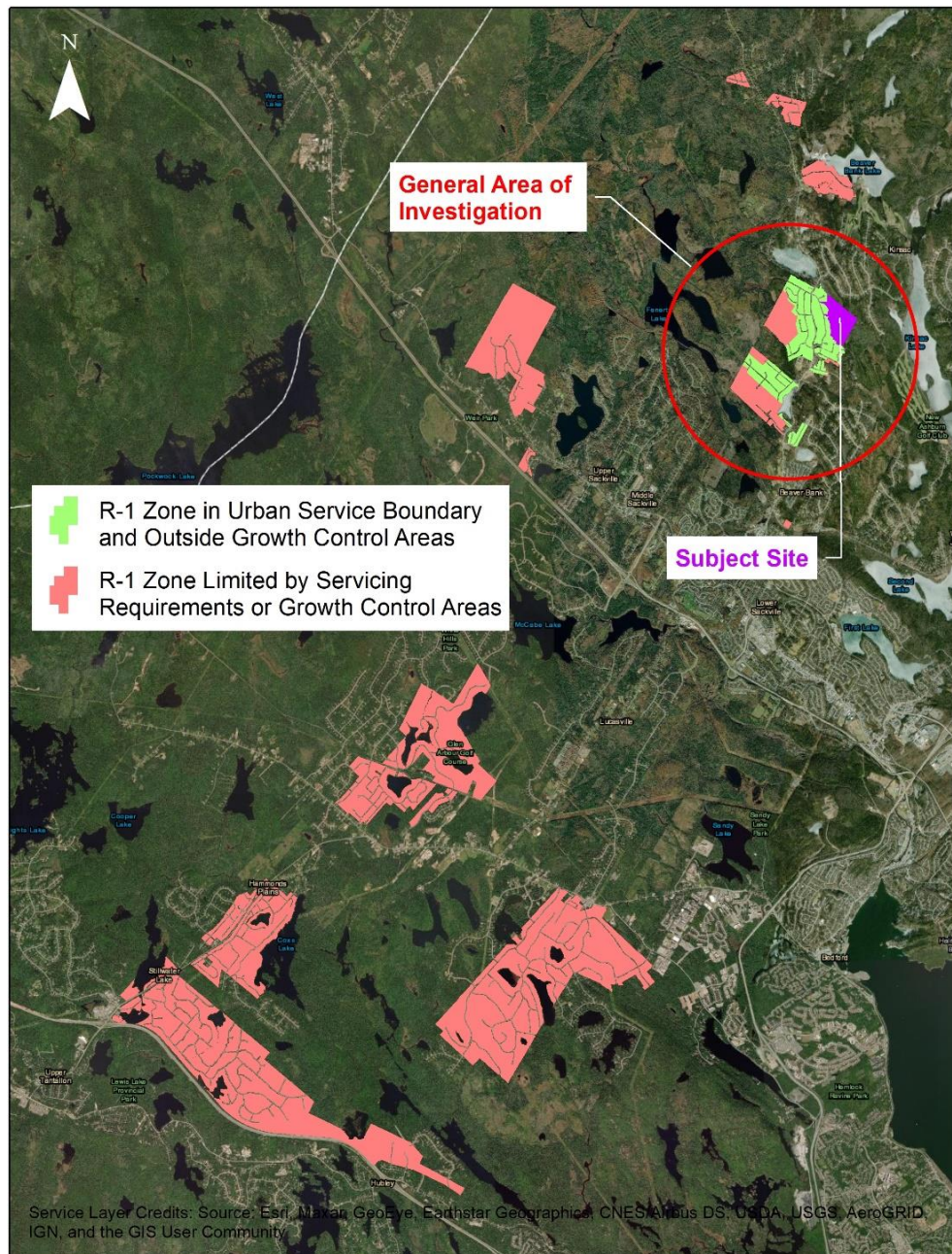
The Subject Site is the remaining undeveloped lands of the Carriagewood Estates subdivision, identified as the entirety of PID 00468694 and outlined in yellow in the concept plan below. It contains approximately 88 acres of land, and represents 270 potential building lots. We note that the same lot yield is achievable under current R-1 zone standards. The impact of these changes to the Carriagewood project itself is a reduction in road construction and an increase in open space; the total dwelling unit count is unchanged.



Carriagewood Estates– Proposed Development Concept (Source: Clayton Developments)

R-1 ZONE AREA

In addition to the Subject Site itself, the requested Land Use Bylaw amendment would apply to a significant quantity of other land in the plan area that is subject to the R-1 zone. However, the scale of practical impact is significantly smaller once subdivision regulations are considered; much of the R-1 lands are not within the service boundary, and in some areas where water-only services are required, the Beaver Bank / Hammonds Plains Growth Control Area overlay prohibits new street creation, effectively prohibiting further subdivision in those undeveloped lands. Our investigation focussed principally on the area indicated below:



R-1 Zone Context (Source: HRM Open Data, ServiceNS, Turner Drake)

Clayton has separately estimated that this frontage reduction would result in 14 additional lots being developed in the few remaining examples of enabled-but-undeveloped R-1 lands outside of the Carriagewood project. We have not analysed this independently as the incremental number of lots is minor, and therefore not material to our investigation.

KEY CONCEPTS IN LAND ECONOMICS

In this letter we examine the economic feasibility of redevelopment arising from the proposed amendment. We analyse local real estate market data and current property boundary mapping to evaluate economic feasibility and further explore the potential for future market conditions under which we would expect stronger feasibility. We do this through a land economics approach which focusses on the value difference between properties in the area as they exist today, and the market value of saleable building lots that could be created from them. The original application package includes an annex (Attachment 6) with several simplified proformas which examine different plausible development scenarios to compare various costs and revenues and assess overall economic feasibility. While this is helpful, in our opinion it both overcomplicates the issue by considering the value of a completed redevelopment and the major costs required along the way, and overestimates the feasibility because it does not account for opportunity cost.

Residual Land Value

Land values for development sites are a derivative of the value associated with that site's Highest and Best Use. In land economics terminology, land captures the residual value that exists once all costs associated with new development (including builder/subcontractor profits) are subtracted from the market value of the finished project. In other words, due to competition in the industry for building sites, lots will tend to be bid up and ultimately purchased for the maximum amount that the successful buyer can afford, while still having a reasonable expectation that all their remaining costs will be recouped through the sale of the finished house. This means that all other construction costs incurred after the purchase of the building lot are superfluous, being already reflected in the market price for the lot to begin with.

Opportunity Cost

An opportunity cost arises when taking one course of action eliminates your ability to take the next best option. In the context of this letter, the opportunity cost associated with redevelopment of a property is the value that the owner could realise simply by selling it as-is. The development proformas in Attachment 6 of the application package assume redevelopment under the new lot standards would be undertaken by current property owners and therefore do not include costs for acquisition of their property, only others that are required to achieve a sufficient land assembly. This is accurate in a practical sense, but in a land economics sense it means that the negative financial returns shown by the bottom line calculation ignores the foregone revenue that the owner would have collected from their current property simply by selling it.

This foregone revenue is the opportunity cost that current property owners incur by redeveloping the property. They lose both the shortfall on development as the sales revenue does not cover the various development costs, and they also lose out on the proceeds of selling their property as it existed before redevelopment was undertaken. In most cases, this would further reduce the economic feasibility shown in Attachment 6, and by a significant margin. The exception to this is the final example of two 100ft lots where redevelopment is compared against the as-is sale value. This indirectly reflects opportunity cost and as a result, reflects a financial shortfall of \$270,000 compared to the far smaller shortfalls shown in the other examples.

ANALYSIS

What Creates the Risk?

Creating an opportunity to subdivide existing lots through regulatory changes in no way guarantees that it will occur. As HRM staff planners well know, there are planning entitlements across the municipality for land uses and development intensities, often decades old, which never come to fruition despite the regulatory opportunity. For example, there are existing residential properties in the R-1 zone area which are of sufficient size that two lots could be created under present zoning standards, in some cases even without the need to impact existing lot access or residential structures. Yet these have remained unsubdivided for decades. There are existing undeveloped building lots which could be built upon and contribute to an increase in population today, yet they remain underutilised for no reason other than the preference of their current owner. Conversely, sometimes property owners undertake development activities which defy any financial logic, but are driven by other unique and personal reasons. It is very difficult to account for individual behaviours and motivations, and one has to assume that if an option exists,

someone, somewhere, is likely to take advantage.

However, staff concerns about potential traffic and neighbourhood character impacts require more than the occasional instance of odd individual behaviour. This potential resubdivision/redevelopment activity must occur broadly and frequently throughout the area in order to accumulate sufficient additional density as to create systemic impacts. This is unlikely to happen just because of the personal and unique needs of current property owners. It requires redevelopment activity to be undertaken on a commercial scale, which will only occur and be sustained under conditions of economic feasibility. Profit motives, not personal motives, would be required to drive that outcome.

The principal question we examine is whether an economic case exists under current market conditions for redeveloping existing properties under the standards of the proposed amendment. If such conditions exist and the amendment is adopted, we would expect to see widespread redevelopment over time, increasing density throughout the area, which could lead to the issues highlighted by the Team Review.

Most of the centrally serviced R-1 land within the plan area is already developed. If there is to be a significant increase in the number of building lots, it will involve demolishing existing homes to release the land for subdivision. The likelihood of that happening depends on the economic viability of the exercise, which in turn is driven by the market price of existing homes versus the market price of building lots within the area.

Market Price of Existing Homes

We have researched the selling prices of all homes in the area over the past five years (2015 to 2020). There are a total of 197 sales, broken down by price as follows:

Selling prices BEFORE indexing:			
\$157,000 (min.)	to	\$200,000:	15 sales
\$200,001	to	\$250,000:	46 sales
\$250,001	to	\$300,000:	83 sales
\$300,001	to	\$350,000:	37 sales
\$350,001	to	\$439,000 (max):	16 sales
Total sales 2015 to 2020			197 sales

Since prices have been increasing over this time period, a more accurate picture is achieved by indexing the selling prices of this dataset from the year of sale up to the current date:

Selling prices AFTER indexing up to 2020:			
\$195,000 (min.)	to	\$200,000:	2 sales
\$200,001	to	\$250,000:	18 sales
\$250,001	to	\$300,000:	59 sales
\$300,001	to	\$350,000:	70 sales
\$350,001	to	\$487,000 (max):	48 sales
Total sales 2015 to 2020			197 sales

Realistically, the entry level price for a home in the area is currently around the \$200,000 price point. Not surprisingly, these are older homes and several are located along the busy Beaverbank Road. More surprisingly, however, is that the homes in the lower price bracket have relatively large lots, with sufficient lot area and frontage to support a potential subdivision into two 40ft lots under the R-1 Zone changes being proposed (i.e. they exceed 80ft frontage and exceed 8,000 ft² in area). Consequently they become potential candidates for a tear-down under the proposed R-1 Zone changes.

Market Price of Building Lots in the Area

The new Splinter Court cul-de-sac off Daisy Drive at the entrance into the Subject Site provides a benchmark price point for building lots in the area. Eight lots were sold in 2019/2020 for a consistent price of \$79,900 to the same builder, and homes have subsequently been built and sold. These are typical 60 ft lots (though most are irregular due to the street configuration), which is the minimum requirement under the current R-1 Zone.

More relevant to this exercise, however, is the small sample of building lots which have been subdivided and sold among the older housing streets within the area. Six examples were identified in the 2019/2020 period, ranging in price from \$55,000 (60ft frontage) to \$70,000 (75ft frontage). Intuitively, 40ft building lots among the older housing streets would command less.

Economic Viability of a Tear-down

Clearly it is uneconomic to acquire an existing home, even at the entry level price point of \$200,000, to create two 40ft building lots worth no more than \$70,000 each, even without taking into account the cost of demolition, survey/subdivision fees, new sewer/water laterals and possible sales commissions on re-sale. Even if no acquisition were involved, the same principle applies; it would be uneconomic for an existing home owner to incur an opportunity cost by abandoning a home worth \$200,000 just to release its potential as two building lots worth a combined \$140,000.

Potentially there might be opportunities to acquire an entry level home with sufficient frontage to create three (or more) 40ft lots. The only clear example we have found within the past five years was a 2015 sale of a home on Barrett Road at \$208,000 (indexed up to 2020 = \$277,000) with 228ft frontage and 83,600 ft² lot size, potentially capable of supporting five 40ft lots. At the time, it was marketed with the “potential to subdivide into three (60ft) separate lots” under the existing R-1 Zone requirements but it has not been subdivided to date. This is a fairly isolated example; it is one of only seven homes on the northern side of Barrett Road which were in the non-serviced district when they were built, but which now fall within the both the sewer and water service boundaries with services now installed along the road. Hence these homes occupy vastly oversized lots and, depending on their value, could meet the economic viability test for a tear-down.

Other Potential Opportunities for Subdivision

We have found isolated examples within the area of building lots being subdivided from surplus land next to an existing home, with no requirement to tear-down an existing structure. The examples we have found are on Carrie Crescent, Franklyn Drive and Sherri Lane, all older housing districts, and the subdivisions created between one and three new building lots with no tear-down involved. Because of the configuration of the surplus land, only one example could potentially have yielded an extra lot under the proposed 40ft frontage reduction. There will likely be other such opportunities for creating building lots from surplus lands within the area, but the prospect of yielding more lots with 40ft frontages versus the existing 60ft is unlikely to be significant, on top of the overall rarity of these instances.

Potential Feasibility under Other Conditions

With only few exceptions that mostly serve to prove the rule, we have found that the value difference between existing properties and new building lots is not sufficient to support economically feasible redevelopment to a 40ft lot standard. If redevelopment of existing R-1 lands is generally unfeasible under current market conditions, are there conditions under which that feasibility turns positive, and are they plausible?

Given our feasibility test is dependent on only two factors, the selling price of building lots and the selling price of existing properties, it should be apparent that economic feasibility would be improved if building lots were to increase in value, existing properties were to decrease in value, or a combination of both. The two most common redevelopment scenarios would be turning existing 80ft residential properties into two 40ft building lots, and turning assemblies of two existing 60ft residential properties into three 40ft building lots. Ignoring all costs associated with redevelopment itself, this would suggest that new 40ft building lots must be worth:

One home into two lots = $1/2 = 50.0\%$ of the market value of an existing 80ft residential property
 Two homes into three lots = $2/3 = 66.7\%$ of the market value of an existing 60ft residential property

In our valuation experience, prices for residential building sites are a fairly stable proportion of the expected market value of the project on completion, typically accounting for 15% to 25% of finished property value (most often around 20%). This is a reflection of households' priorities between attributes of the residential structure itself, and the location/characteristics of the lot it sits on. To illustrate this relationship, we undertook a spot-check of new home sales in recent years at various suburban locations around HRM. The

table below shows a relatively consistent lot value proportion, despite differences in time, location, and overall price point:

Location / PID	Building Lot Price	Finished Home Price (excl. HST)	Lot Value Percent of Finished
Lost Creek, Beaver Bank PID 41381641	\$75,000 sold Jun 26, 2020	\$360,776 sold Dec 4, 2020	20.79%
Indigo Shores, Sackville PID 41196064	\$121,477 sold Jan 14, 2020 (calculated at 25% of the total price on a builder's bulk purchase of 4 lots)	\$612,522 sold Oct 1, 2020	19.83%
Kinloch, Fall River PID 41381336	\$87,500 sold Apr 15 2020	\$388,170 sold Jul 29, 2020	22.54%
Kingswood North, Lucasville PID41169764	\$77,500 sold Jan 14, 2019 (calculated at 25% of the total price on a builder's bulk purchase of 4 lots)	\$326,855 sold Jul 8, 2020	23.71%
West Bedford, Bedford PID 41420944	\$102,500 sold Feb 11, 2016	\$478,174 sold May 3, 2017	21.44%
Russel Lake West PID 41350943	\$125,400 sold Jun 9, 2017	\$552,000 sold May 28, 2020	22.71%

In addition to our experience, this relationship is apparently consistent across North America. It is an accepted ratio within the development industry, even to the extent that it often appears in land economics literature, as exemplified by Glaesar & Gyourko (2018):

... to estimate the value of a price of land, we use an industry rule of thumb based on an ad hoc survey of home builders that land values are no more than 20 percent of the sum of physical construction costs plus land in a relatively free market with few restrictions on building. We have used this metric in earlier research (Glaeser and Gyourko 2003, 2008), and it continues to be relevant and consistent with the data... (p.8)¹

Taking this 20% figure, we can translate the previously discussed price relationship between existing homes and new building lots into an estimate of the same relationship between existing homes and new construction homes:

One 80ft property into two 40ft lots
50% of existing property value
÷ 20% lot to finished property value
-100% for initial conditions
= 150% price premium for new over existing homes

Two 60ft properties into three 40ft lots
66.7% of existing property value
÷ 20% lot to finished property value
-100% for initial conditions
= 233.5% price premium for new over existing homes

The foregoing suggests that we could expect to see basic lot subdivision approach economic feasibility when prices for new construction homes are at least 150% more than existing home prices, with feasibility

¹Glaeser, E., Gyourko, J. (2018). The Economic Implications of Housing Supply. *Journal of Economic Perspectives*, Volume 32(1), 3-30. <https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.32.1.3>

for broader assembly and redevelopment activity requiring even higher premiums of 233.5%.

Plausibility of Other Conditions

In our professional opinion, it is virtually impossible for the price premiums identified in the foregoing section to be observed in the market as a general condition. This is because prices for new and existing residential properties are inherently linked; existing homes are a substitute product for new construction homes. If prices for new builds get too high, purchasers will look to options in the resale market that represent a more attractive value, either purchasing an older existing property and using the price difference to invest in renovations, or simply pocketing the difference for other priorities. So, while the market always expects new construction homes to command a premium over similar existing homes, that premium cannot get too high before market activity shifts bring the prices of existing properties back up to speed. Only under extreme supply constraints, in niche/luxury housing areas, and at comparatively small scales would such conditions be possible (e.g. teardown and redevelopment of waterfront lots on the Northwest Arm).

To further substantiate our opinion, we have assembled home sales data for the entire Beaver Bank submarket area (as defined by MLS®) over the past decade to compare sale prices of new and existing homes and calculate the resulting premium:

Average Price of New-Build Detached Housing versus Resale in Beaver Bank

Sale Year	All Types			3 Bedroom			4 Bedroom		
	Resale	New	Premium	Resale	New	Premium	Resale	New	Premium
2011	\$ 241,408	\$ 297,050	23%	\$ 229,589	\$ 306,900	34%	\$ 259,035	\$ 380,000	47%
2012	\$ 260,235	\$ 320,333	23%	\$ 252,583	\$ 304,000	20%	\$ 278,366	\$ 328,500	18%
2013	\$ 262,030	no sales	-	\$ 240,786	no sales	-	\$ 284,288	no sales	-
2014	\$ 260,102	no sales	-	\$ 254,290	no sales	-	\$ 268,476	no sales	-
2015	\$ 270,724	\$ 385,755	42%	\$ 252,078	\$ 385,755	53%	\$ 283,486	no sales	-
2016	\$ 271,459	\$ 414,197	53%	\$ 271,131	\$ 384,696	42%	\$ 289,562	\$ 412,450	42%
2017	\$ 278,311	\$ 456,055	64%	\$ 255,277	\$ 362,700	42%	\$ 310,552	\$ 627,750	102%
2018	\$ 287,513	\$ 441,778	54%	\$ 275,892	\$ 369,384	34%	\$ 305,817	\$ 541,620	77%
2019	\$ 293,194	\$ 508,524	73%	\$ 279,670	\$ 406,714	45%	\$ 311,185	\$ 595,035	91%
2020	\$ 338,418	\$ 477,847	41%	\$ 315,391	\$ 456,523	45%	\$ 362,632	\$ 458,923	27%

Any sale with home age listed as 0 or 1 year is considered new construction, all other sales with a listed building age are considered resale. Source: MLS®

This data clearly indicates the implausibility of observing new construction price premiums on the scale required by our previous estimates. In only one year, and only when narrowing the data to larger home categories, did this premium exceed 100%. At no point in the last decade, including recent years which have been among the strongest in living history for Halifax's residential property market, did market conditions approach anything close to what we estimate would be required to see broad redevelopment of existing residential properties.

CONCLUDING REMARKS

The text amendment proposed by Clayton for lowering frontage requirements in the R-1 zone does create a new possibility for development that raises the theoretical maximum density of R-1 lands by 50%. HRM staff have correctly flagged this as a potential source of unintended consequences; broad redevelopment could lead to traffic impacts and a relatively modest change to neighbourhood character.

To evaluate the risk of these consequences, we have examined real estate data for the local area and conclude that while some subdivision and redevelopment of existing residential properties may occur (we have found some examples of it occurring under current standards) these are unique and unlikely events. We conclude that current market conditions do not make this redevelopment activity feasible at a scale which could give rise to those unintended consequences.

Real estate markets can and do change, so we have also attempted to identify conditions under which this activity may become broadly feasible. In our opinion, it is not possible for real estate market functions to give rise to the price disparity between new and existing home values that would be required.

In our analysis we have approached the issue conservatively, using a method which does not account for any of the considerable costs associated with redevelopment. Those issues are moot because the basic price difference between existing properties and the building lots they could be divided into does not break even. In short, under any plausible market conditions, the additional increment of density enabled by lowering lot frontage requirements to 40ft is just not sufficient enough to incentivise redevelopment activity as a commercial undertaking.

Yours truly,

TURNER DRAKE & PARTNERS LTD.

Original Signed

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Original Signed

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