



PLANNING SERVICES LTD

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November 6, 2018

Luc Oullet, MCIP, LPP  
Planner III  
Halifax Regional Municipality  
Via Email: ouellet@halifax.ca

Re: Draft Downtown Dartmouth Plan - 101 King Street Opportunity Site

Dear Luc:

We are pleased to submit the following for your consideration in response to the draft Downtown Dartmouth Plan and Land Use Bylaw.

### **Understanding / Issue**

Since 2012, EDM has engaged with HRM Staff on the status of the lands known as 101 King Street, a designated Opportunity Site in Downtown Dartmouth. In 2012 through to today, Staff have expressed their support for additional height and density on the site given its size, location, adjacencies and development challenges, as well as fulfilling the stated intent of the proposed Higher Order Residential designation. Under the current Downtown Dartmouth Plan, the subject lands are limited to up to 4 storeys in height and 40 units/acre by development agreement.

The Draft Downtown Plan (DDP) removes the long-standing Opportunity Site designation and replaces it with a by-right designation and zone (Higher Order Residential). The implied building form in the DDP appears to reflect the overall vision of the existing Opportunity Site through a lower height limit on King Street and a modest height increase on the back of the site. EDM does not disagree with this development form and has expressed support on numerous occasions (see letters to Centre Plan Team on December 2, 2016, July 13, 2016 and June 21, 2016). However, as expressed to Staff both in previous correspondence and in person at the Downtown Dartmouth Open House in October, the heights as proposed are problematic given the size of the site, the way in which height is defined, and the significant grade change across the site (more than 7 metres (25 feet) from the King Street side near Church Street, to the rear corner of the site abutting the Alderney Manor).

### **Request**

Given the current Opportunity Site designation and physical characteristics of the site, we request the height maximum be set at 14 metres along the King Street frontage for a depth of 10m and the remainder of the lands be limited to 26 metres (see diagram below). This is a modest increase over the heights currently proposed in DDP (11metres and 20metres) and in line with the range of heights proposed within the Higher Order Residential areas. This will allow proposed buildings to better address the grade changes along both



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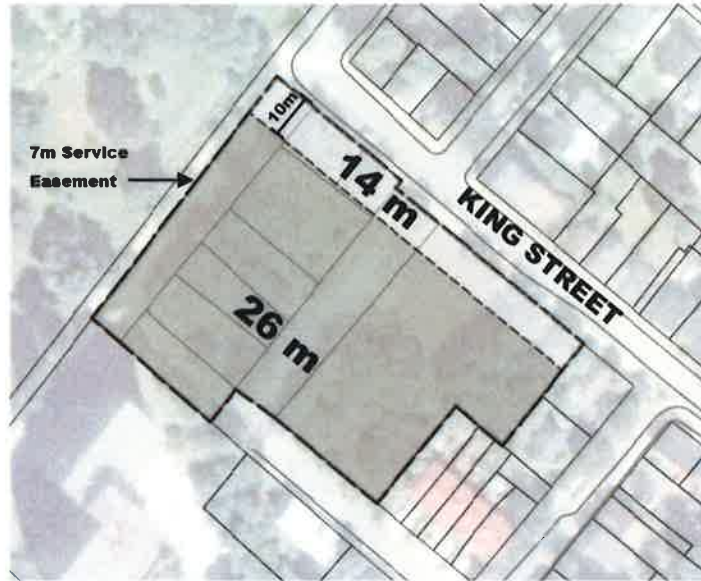
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King Street, Edward Street and along the boundary of the Dartmouth Common.

Given the grade on the back portion of the property, the additional 6 metres in height will have no significant impact on the low rise King Street frontage. Any building constructed at the rear portion of the property will be abutting Alderney Manor. The rear wall of Alderney Manor has no windows into habitable spaces (see image on the right). Any additional height on this portion will have no impact on the residents of the building and will serve to screen this large blank wall from view, offering a more visually pleasing view from Park Avenue.



The proposed regulations for properties abutting Established Residential designations (“transition rules”) will require any 26 metre building to step down to or be set back from the 4 storey townhomes on Edward Street. On the Dartmouth Common side of the lands, an existing service easement (approximately 7 metres in width) establishes a significant setback from the Common and the public sidewalk/path linking Park Avenue to Alderney Drive. In this regard, we submit that the modest height increase will have no significant impact on the character of the area and allow for a future development to be better integrated into both the established residential area along the boundaries to the north and east and the Downtown areas along Alderney Drive to the south.



We submit that these requested changes are reasonable and modest in nature considering the properties long-standing recognition as an Opportunity Site that is situated on the boundary of major public space, a high-density Downtown business area, and a low-rise historic neighbourhood.

Please do not hesitate to contact us if you have any questions or require additional information.

Sincerely,  
EDM Planning Services Ltd.

Jessica Harper, MCIP, LPP

cc: [planhrm@halifax.ca](mailto:planhrm@halifax.ca)



**FILE COPY**

**ENVIRONMENTAL DESIGN AND MANAGEMENT LIMITED**  
PLANNING • ECONOMICS • ECOLOGY • ENGINEERING • GEOMATICS

December 2, 2016

Miles Agar, MCIP  
Principal Planner - Policy and Strategic Initiatives  
Planning and Development  
Halifax Regional Municipality  
Via email: [agarm@halifax.ca](mailto:agarm@halifax.ca)

Re: MPS Amendment Request - Downtown Dartmouth MPS, "Opportunity Site A"

Dear Mr. Agar:

Please accept this letter and enclosed material in application for an amendment to existing site-specific policy in the Downtown Dartmouth MPS. The request is for minor amendments to existing policies to better reflect the surrounding conditions of the site and planning objectives for the Regional Centre and Downtown Dartmouth area.

The subject lands, made up of 10 separate but contiguous parcels totaling 2.3 acres, are strategically located within the Downtown Dartmouth Plan Area (**Table 1; Figure 1**). They are immediately adjacent to the Dartmouth Common, and within walking distance to the Metro Transit's new Bridge Terminal (bus) and the Alderney Ferry, the Alderney branch of the Halifax Public Library, Dartmouth Sportsplex, 3 schools and the main Downtown Dartmouth commercial areas of Portland Street and Ochterloney Street.

PID	Civic Address	Area (SF)
00109207	101 King Street	38,565
00109306	32 Park Avenue	3,000
00109314	37 Church Street	2,025
00109322	35 Church Street	8,800
00109330	31 Church Street	4,400
00109348	29 Church Street	3,850
00109355	27 Church Street	5,405
40880080	Former Church St. ROW	12,799
40880130	Former Park Ave. ROW	12,778
40880148	Former Edward St. ROW	7,081
<b>TOTAL</b>		<b>98,703</b> (2.3 acres)

*Table 1: List of PIDs comprising the subject lands.*

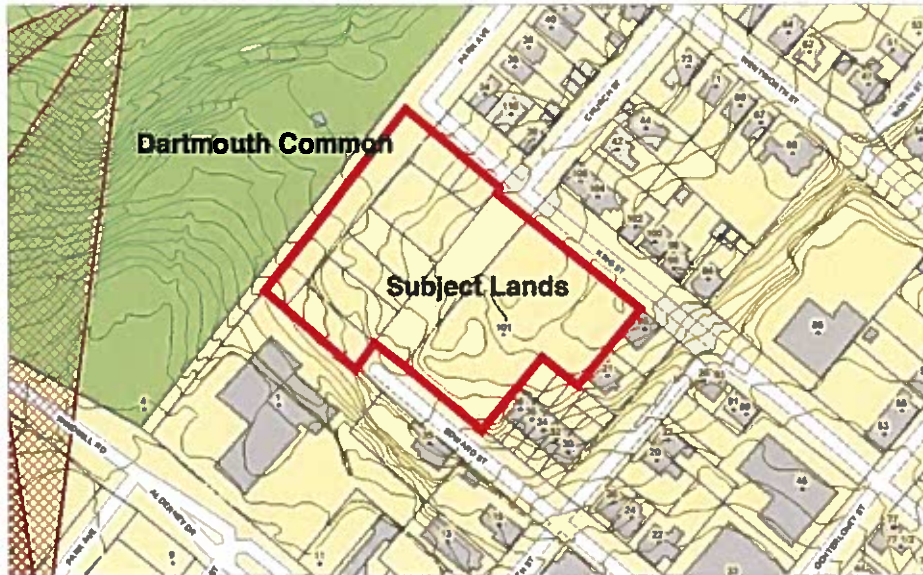


Fig. 1: Subject lands within Downtown Dartmouth context. See Attachment 1 for individual PIDs

The subject lands have been designated as an opportunity site through two municipal-led public planning process - in 2000, as part of the Downtown Dartmouth Secondary Planning Process and subsequently in 2006 as part of the Regional Plan. In both cases, this designated opportunity site was identified for its potential in helping to achieve housing and settlement objectives in Downtown Dartmouth and the Regional Centre.

#### **Background to Request**

EDM has discussed the constraints and opportunities for the site with HRM Staff since 2012. At that time, Staff acknowledged that the current height and density limits within the Downtown Dartmouth Plan were “very limiting”, as they did not take into account the size of the site, the significant grade change across the site, and its surroundings to the south and west.

The property owner has expressed strong interest and willingness in participating in a plan review process since 2012. We were, however, excluded from the initial Downtown Dartmouth review exercise in 2014 and the Draft Centre Plan (2016) appears to classify the lands as “Established Residential Area” despite the lands - almost a complete block - being vacant since the 1970s. Given the importance that the existing Downtown Dartmouth MPS places on the site as a key residential infill and opportunity site, and the settlement targets set in the Regional MPS, we feel that a request to revise existing site-specific Development Agreement policies in the Downtown Dartmouth MPS is reasonable.

### Policy Context

Currently, height and density caps on the property conflict with the overall local and regional planning settlement objectives. These limits make planning for the subject lands under existing regulations unviable given the limitations and risk.

The lands have been recognized as a large Opportunity Site since the adoption of the Downtown Dartmouth plan. The Opportunity Site policies for Downtown Dartmouth have been amended as recently as August 2016, when a new Opportunity Site was designated. The existing policy for the subject lands is as follows:

Site A - Park Avenue/King Street (2.1 acres)

*This site has been vacant since 1970, when portions of Church Street, Park Avenue, and Edward Street were closed and deeded to a developer who planned to build two 15-storey high rise residential buildings. A number of existing single family houses were torn down in anticipation of this project, which never occurred. The site is the largest of the opportunity sites within one of the smallest neighbourhoods. Any redevelopment must be carefully designed to complement rather than overwhelm the area. Area residents would like development on this site to be geared towards younger people and families to the area to counter an aging population in the area.*

While the description of the lands and future potential of the lands clearly outlines the importance of the King Street frontage, it fails to recognize the other boundaries and its adjacency to the Downtown Dartmouth Business area. Given its size, it is well suited to provide the transition in scale from Downtown core to the residential neighbourhood. As noted in the description of another Opportunity Site on Irishtown Road, redevelopment of this subject lands "can occur without the loss of any existing housing which is a goal of this plan." Similarly, the language used in the description of Opportunity Site D - "King Street / Alderney Drive / Wentworth" - is similarly applicable to the subject lands: "This site is conducive to either medium or higher density housing. Any development should be sensitive to existing single family housing along King Street".

A minor amendment to the MPS, and to the corresponding Development Agreement criteria contained in N-5B(i) and (ii), will provide the ability to redevelop <sup>the</sup> site within the intent of the existing policy in regard to King Street, while allowing for the necessary density over a portion of the site to make redevelopment viable. We have prepared preliminary massing scenarios to demonstrate how a thoughtful design approach can both enhance and protect the existing neighbourhoods, as the site is where four different land-uses are juxtaposed: low-rise residential, high-density institutional, high-density commercial, and a major urban park.

### Site Design Details

The guidance for future redevelopment of the site included in the 2000 Plan emphasizes building form, site configuration and transition to the existing neighbourhood to the north. Within this context, EDM has produced two preliminary redevelopment scenarios for the lands that aim to meet the intent for Residential Infill Opportunity Sites in Downtown Dartmouth and the subject lands specifically, while also factoring in changes that have occurred in the area since the policy was first developed. Through our work to date, it is anticipated that potential redevelopment scenarios may respond to existing policy intent and opportunities in a number of ways:

- Provision of a mix of unit types and sizes, in both apartment- and townhouse-style;
- Provision of townhouses or townhouse-style units along the King Street frontage;
- Siting of tallest buildings nearest to Alderney Manor and the Dartmouth Common;
- Selective cutting was carried out on the site in May 2016 to open up site lines; however, care was taken to maintain buffers along the western boundary to provide separation from adjacent residential uses;
- Maintenance of street corridor views from Park Avenue and Church Street;
- Provision of a shared parking podium to accommodate majority of parking on site so that parking does not dominate the site; if surface parking is provided, it is envisioned to be located at the rear of proposed townhomes in the interior of the block so that it is not visible from the street;
- Shared driveway access ~~off~~ for townhomes off King Street to reduce vehicle access points.

Through the concept design process, care has been taken to mitigate the impact of additional height, both through the siting of the tallest building(s) and the placement of townhomes along King Street. Walking along King Street, the tower portion of both scenarios will not be visible or barely visible due to both the significant setback from King, as well as grade change across the site (~ 10m). This grade change also provides an opportunity to locate the majority of parking beneath the surface while limiting excavation (see Fig. 2). The blank facade of Alderney Manor facing the site results in minimal impact from the tallest portion of the building on existing residents.

The property owner has carried out field investigation as part of the design process:

**Preliminary Servicing** - Available servicing information was reviewed in a meeting with Halifax Water Staff. Halifax Water confirmed that ample opportunity for servicing connections exist given the frontage available. Halifax Water indicated that capacity will not likely be an issue, as the subject lands are included in their master servicing plan for the area.

**Preliminary Traffic Impact Analysis** - Griffin Transportation Group Inc. completed a preliminary traffic impact analysis based on a development scenario of 80-100 units/acre. The findings indicate that the development scenario would have marginal and acceptable impact on the existing road network. It recommended that, given the site line limitation on King Street, townhomes be accessed off a single driveway as opposed to each unit be serviced separately. It was also recommended that the main access to the parking garage be off of Edward St. It should also be noted that even though it is likely that this site would have a high percentage of residents relying on public or active transportation options given its location, no trip reductions were used to account for a mode split for this assessment.

**Archeological Screening** - CRM Group completed an archaeological screening in 2015 in advance of any detailed design on the site. While there was nothing identified as being of great historical significance, they did provide recommendations for any development occurring within the subject properties:

- Avoid the stone retaining wall on Edward Street if possible. If avoidance and/or protection is not possible, it is recommended that the wall be documented and recorded by a qualified archaeologist
- Mechanical excavation to occur within the former "Seaview" manor, "North Range" and "Hawthorn" properties prior to development to further expose and record any structural remains of houses and any associated features.
- All other areas be cleared of the requirement for further archaeological investigation.

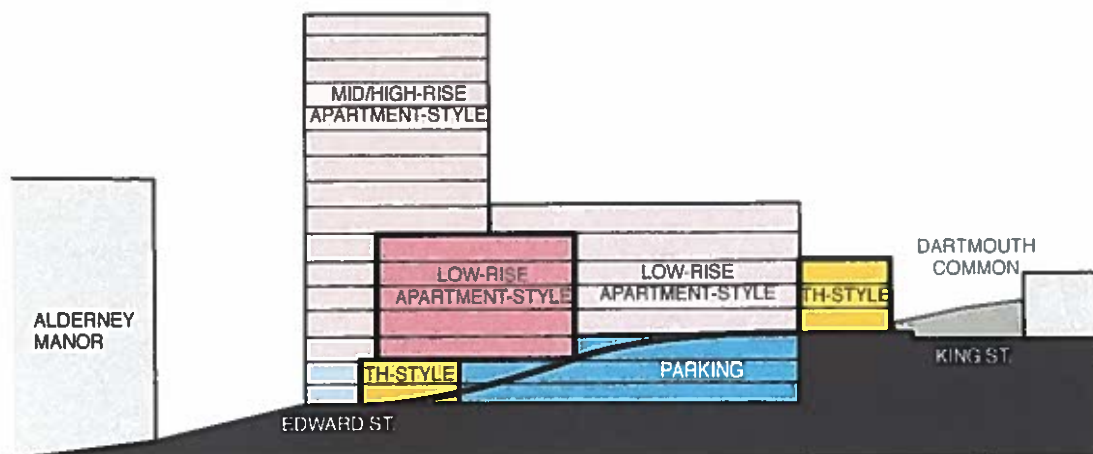


Fig 2: diagrammatic cross-section through the site, illustrating mitigating factor of grade change and placement of townhomes.

### **Preliminary Development Concepts**

Assumptions for the site were made respecting issues such as building height, bulk and spacing and vehicle access. These assumptions were based on a variety of factors, such as existing policy and land-use controls, development precedent, proposed land-use controls (Downtown Dartmouth and proposed through the Centre Plan), input received during the preliminary field investigation (as noted above), and input received previously from HRM Staff.

Preliminary design utilizes a townhouse-podium and tower configuration, with either stacked townhomes or standard townhomes on the remainder of the site. Surface parking is minimized, as buildings are constructed on top of a shared parking garage podium which is likely to be accessed via Edward Street, as per the recommendations of a traffic impact statement.

#### **Scenario A (Fig. 3)**

Eight standard townhouse units are located along King Street, with parking placed in behind the units with a single access at Church Street. This is to avoid sight line issues, as identified by the traffic review. A drop off area for the multi-unit buildings is also accessed via the shared driveway.

Eight additional townhouse-style units are shown near the intersection of King and Park as part of the low-rise portion of the podium. These units serve to provide a continuous townhouse street frontage and transition to the larger building. The podium runs along the Dartmouth Common boundary, stepping up to 7 storeys and then to 15 storeys (B1) at the back of the site. This aims to maximize the floorplate, as well as views to the common, while concentrating on height in an area where it is mitigated by the change in grade and adjacency of another large building (seniors care home on Alderney Drive). A second low-rise building sits south of the tower, and avoids the an old stone wall on Edward Street. Both multi-unit buildings are situated on a two level parking podium that is accessed via Edward Street.

#### **Scenario B (Fig. 4)**

The second options makes use of a similar layout, with driveway access via King Street and parking access via Edward Street. Instead of one large and one small multi-unit building, however, this Option imagines a single point tower of 15 storeys, and three stacked townhouse blocks. Surface parking is eliminated, but drop off areas are available on King, as well as within the easement that runs between Edward and King Street. Buildings are pulled away from the edges to increase vegetative buffers between existing homes, and retain trees near the entrance to the common. All buildings are clustered around shared landscape open space, where direct access is provided to the parking below.



Fig 3: Scenario A

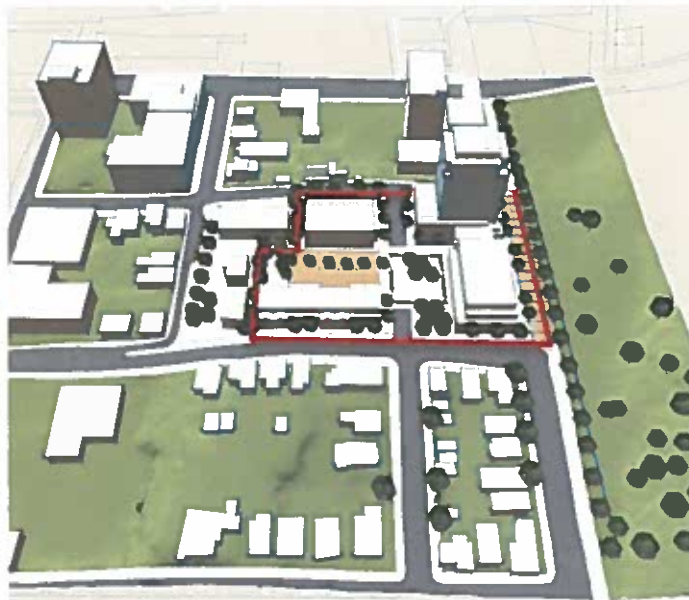


Fig 4: Scenario B



**Summary**

We are requesting an amendment to the description and corresponding Development Agreement criteria for the designated Opportunity Site "A" - Park Avenue / King Street, as contained in the existing Downtown Dartmouth MPS.

This request is for a plan amendment to revise an existing site-specific development agreement policy only at this time. With input and guidance from Staff, we may request to include a concurrent Development Agreement application once the amendment process is initiated and underway, if appropriate at that time.

Once you've had a chance to review this request, we would appreciate the opportunity to meet with you.

Sincerely,

EDM · Environmental Design and Management Limited

**Original Signed**

Matt Neville, MCIP, LPP



ENVIRONMENTAL DESIGN AND MANAGEMENT LIMITED  
PLANNING • ECONOMICS • ECOLOGY • ENGINEERING • GEOMATICS

January 9, 2017

Miles Agar, Principal Planner  
Halifax Regional Municipality  
PO Box 1749  
Halifax NS B3J 3A5

Re: Case 20981 - Amendment Request, 101 King Street, Dartmouth

Dear Mr. Agar:

Please accept this letter in response to your request for preliminary servicing information for the properties known as 101 King Street (see **Attachment A**). This information is intended to support the application made by EDM on behalf of the property owner for an amendment to the site-specific Development Agreement policies contained in the Dartmouth MPS and LUB.

In October 2015, Exp Services Inc. reviewed available servicing information and met with Halifax Water. Through this review, Exp concluded that ample opportunities for servicing connections existed (see **Attachment B**). Exp noted that capacity limitation for the site would not likely be an issue as the property is within Halifax Water's master servicing plan for the area.

Stormwater. Based on available data, there is available stormwater service along Park Avenue, extending across the southwest side of the property (former public ROW). Pipe sizes are 450mm to 600mm in diameter. These pipes make for ideal connection locations. Halifax Water confirmed that there is sufficient surplus capacity in them to accommodate stormwater and that Halifax Water would accept this connection to allow stormwater if one or both lines is found to be combined sewers (Halifax Water was unable to confirm this at the time). If one pipe is determined to be a dedicated storm line, the connection would be made to the dedicated storm line instead of the combined sewer.

Sanitary. Based on available data, there is available sanitary services along Park Avenue, extending across the southwest side of the property. Pipe sizes are 450mm to 600mm in diameter. These pipes make for ideal connection locations. As noted above, Halifax Water confirmed that there is sufficient surplus capacity in them to accommodate sanitary flow and that Halifax Water would accept this connection to allow sanitary service if one or both lines is found to be combined sewers (Halifax Water was unable to confirm this at the time). If one

pipe is determined to be a dedicated sanitary line, the connection would be made to the dedicated sanitary line instead of the combined sewer. There is also a second sanitary line extended into the site within the former Church Street ROW, providing another ideal connection point. In discussions between Exp and Halifax Water, Halifax Water conveyed that they anticipated there to be sufficient surplus capacity to accommodate high-density redevelopment of the site.

Water. The property is surrounding by available water lines. The design and demand of the building will dictate requirements for fireflow. However, in discussions with Exp, Halifax Water conveyed that they do not anticipate issues of limited water system capacity or pressure that would impact redevelopment of the site.

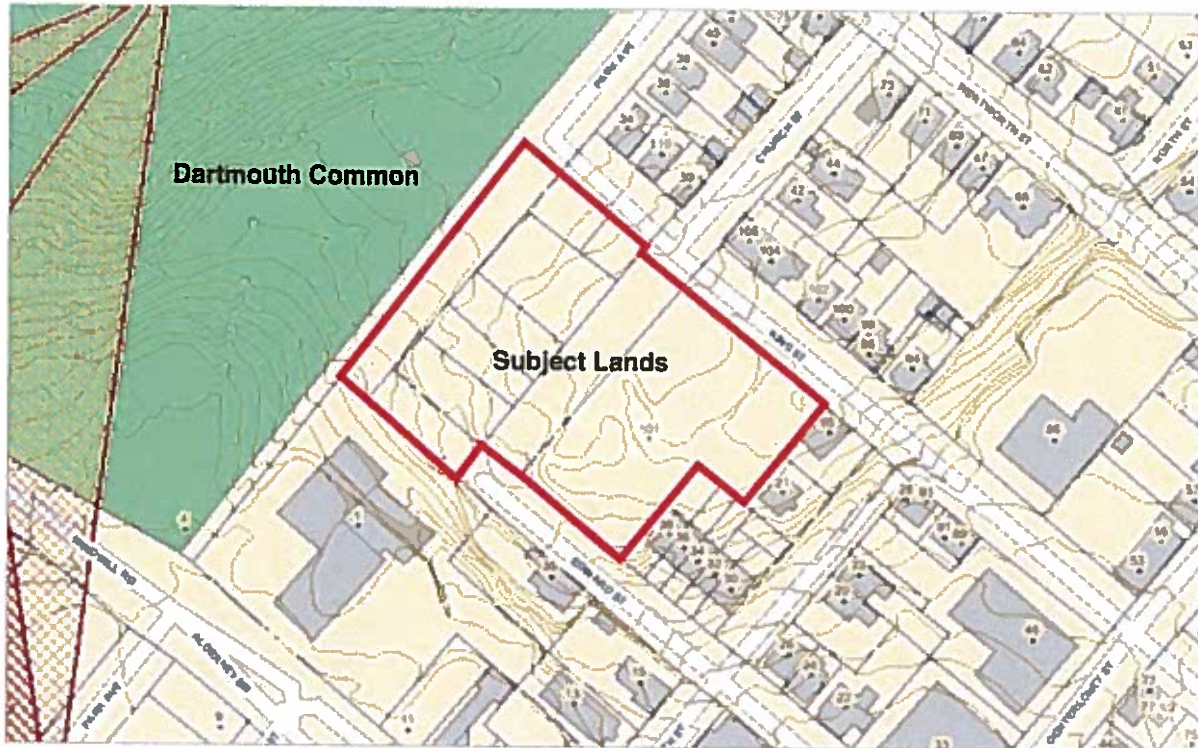
Sincerely,

EDM · Environmental Design and Management Limited

**Original Signed**

Tim Veijot, MBA, P.Eng

# ATTACHMENT A



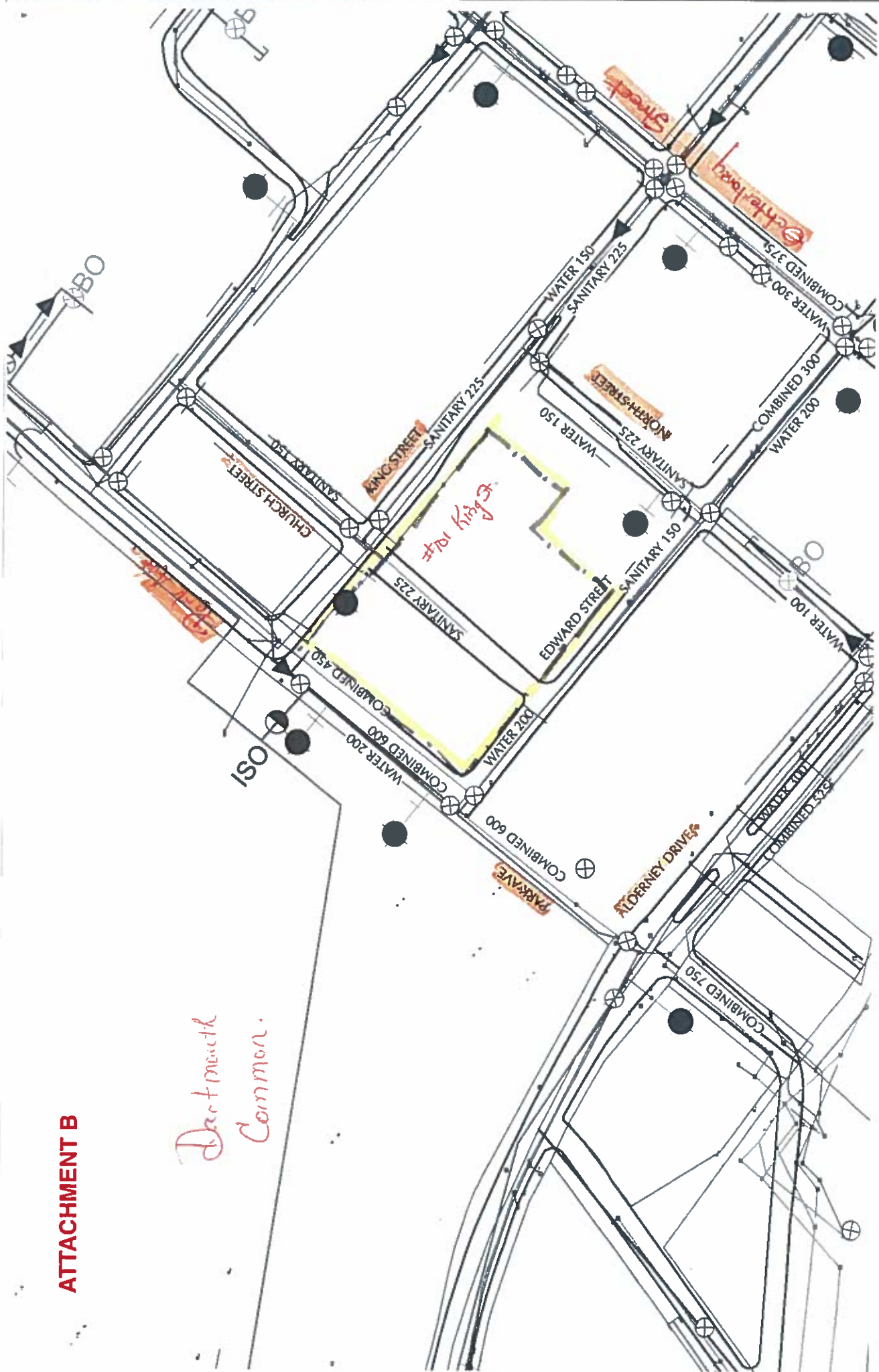
*Subject lands within Downtown Dartmouth context.*

*Properties that comprise the subject lands.*

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40880130	Lot P, King Street (former Park Ave.)	12,778
40880148	King Street (former Edward St.)	7,081
TOTAL		98,703 (2.3 acres)

**ATTACHMENT B**

*Dartmouth  
Common.*



**James J. Copeland, P.Eng.**  
GRIFFIN transportation group inc.  
30 Bonny View Drive  
Fall River, NS B2T 1R2

December 5, 2016

**Leo Brooks, P.Eng.**  
*EDM Ltd.*  
2085 Maitland Street  
Halifax, NS B3K 2Z8

**FILE COPY**

**RE: A Traffic Impact Statement for the King Street residential development**

Dear Mr. Brooks:

**INTRODUCTION**

At the request of *EDM Ltd.*, the GRIFFIN transportation group inc. has completed a traffic impact statement in support of the planning application process that is required for a proposed residential development connecting to King Street and Edward Street in the community of Dartmouth, Halifax Regional Municipality (HRM). It is understood that the planning application process requires a traffic impact assessment be carried out and the approving road agency is the Halifax Regional Municipality.

The proposed development will be situated on an undeveloped parcel of land bounded by the north terminus of Edward Street, Leighton Dillman Park to the north and King Street to the west. The site location and surrounding context is provided in *Figure 1*.

It is understood that the proposed development will contain a total of 180 residential units. This includes 142 apartment-style units in a multi-story building, 24 stacked townhomes and 14 townhomes. There are two vehicle access points that include a main site access via the north terminus of Edward Street, intended to serve the 142 apartments and 24 stacked townhomes, as well as a secondary access to King Street, opposite Church Street, that will only serve the 14 townhomes.

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Source: Bing Maps



[www.griffininc.ca](http://www.griffininc.ca)

**Study Area and  
Site Context**

**Figure  
1**

## EXISTING TRAFFIC CONDITIONS

In order to assess the current traffic operations along the study area streets there was a need to review the traffic volumes and travel patterns in the vicinity of the site. The source of these data included:

- Historical HRM traffic counts including recent data recorded in 2014 at the Alderney Drive / Ochterloney Street intersection as well as 2012 automatic traffic recorder data on King Street north of Ochterloney Street; and
- A site visit and field review on Wednesday July 15<sup>th</sup>, 2015 that included afternoon peak hour intersection turning movement counts at the Ochterloney Street / King Street and King Street / North Street intersections.

All of the available traffic volume information was reviewed and it was determined the weekday afternoon peak hour experienced the highest traffic volumes over the course of a typical week day. As such, this peak hour formed the basis of the qualitative assessment discussed later in this report as it represents a worst case scenario.

A summary of the historical and observed traffic volume information observed during the weekday afternoon peak hour along the key study area corridors is summarized in *Table 1*.

**Table 1: Historical and Observed two-way PM peak hour volumes**

Street Corridor	2012 PM Peak Hour	2014 PM Peak Hour	2015 PM Peak Hour
King Street (north of Ochterloney)	114 vph	-	104 vph
Alderney Drive (north of Ochterloney)	-	1,688 vph	-
Ochterloney Street (between King & Victoria)	538 vph	649 vph	609 vph

The review of historical and observed traffic data indicates that the King Street corridor volumes have remained relatively unchanged over the short term. The Ochoterloney Street corridor volumes have fluctuated somewhat but have demonstrated a slight growth trend. These minimal traffic growth patterns are characteristic of established neighbourhoods such as those located within the circumferential highway around central Dartmouth.

## INTERSECTION SIGHTLINE REVIEW

A review of the available sightlines associated with the proposed accesses was carried out. The review was based on the guidelines contained in the Transportation Association of Canada's (TAC) Geometric Design Guide for Canadian Roads. Since the main site access will connect directly to the north terminus of Edward Street, the sight line review focused on the proposed secondary access to King Street – opposite Church Street.

Although the posted speed limit is 50 km/h along King Street, the sharp horizontal curve at Park Avenue and the crest vertical curve at North Street limits the speed at which drivers can comfortably travel along King Street. Nonetheless, the Transportation Association of Canada's (TAC) stopping sight distance (SSD) criteria for 50 km/h was used for measuring sight lines to the south along King Street and the minimum SSD requirement for 50 km/h is 65m. The available sight lines to the south, measured from a new access located opposite Church Street meets the minimum 65m criteria.

It is understood through discussions with *EDM Ltd.* that this access will only serve 14 townhomes situated on the east side of the development. Given the sight line limitations to the south that are created by the crest vertical curve on King Street, individual accesses for each townhome are not recommended. One single access point opposite Church Street can serve the 14 townhomes and meet the minimum sight distance requirements.

#### SITE TRIP GENERATION

To facilitate the traffic operational review process there was a need to determine the number of vehicles that would be entering and exiting the proposed development site. This is referred to as the trip generation calculation process. Typically, traffic engineers use trip generation rates published by the Institute of Transportation Engineers (ITE) to forecast site-generated volumes for specific land use types. It was determined that the ITE trip generation rates contained in the *Trip Generation, 9<sup>th</sup> Edition* document were appropriate for this study.

A review of the ITE information for this type of residential development identified two similar land use types. These included "Low-rise Condo/Townhouse Dwelling Units" and "Apartment Dwelling Units". It was assumed that the apartment-style units and the stacked townhomes would exhibit similar vehicle trip generation characteristics, and were therefore included in the Apartment dwelling unit land use type. The trip generation characteristics for both land use types are summarized in *Table 2*.

**Table 2: Site Trip Generation – AM and PM Peak Hours**

	Units	AM Peak				PM Peak			
		Rate	In	Out	Total	Rate	In	Out	Total
ITE Code 231 – Low-rise Townhome Units									
Townhomes	14	0.67	2	7	9	0.78	6	5	11
ITE Code 220 – Apartment and Stacked Townhome Units									
Apartments	166	0.51	17	68	85	0.62	67	36	103
		Total AM Peak			94	Total PM Peak			114

As shown in *Table 2*, the 166 Apartment and Stacked Townhome units will generate the largest portion of the site-generated trips (103 vehicles/hour or 67 inbound and 36 outbound) and all of these trips will use the main access via Edward Street. The 14 townhome units will only generate 11 vehicles/hour during the weekday PM peak and these trips will use the King Street access to enter/exit the site.

It should be noted that there were no trip reduction factors applied to this review to account for other trip modes to/from the site that could take the form of transit, cycling and or walking. Given the location of the proposed development and its proximity to amenities in the downtown area of Dartmouth as well as transit hubs such as the Metro Transit's Alderney Ferry Terminal and the Bridge Bus Terminal there is likely to be a reduction in the use of the vehicle travel mode. However; to remain conservative in the trip forecasting process and to provide a worst case scenario, no trip reductions have been applied.

#### QUALITATIVE TRAFFIC OPERATIONS REVIEW

A qualitative traffic operations assessment was carried out at the Ochterloney Street / King Street and Alderney Drive / Ochterloney Street intersections that focused on the critical weekday afternoon peak hour in order to identify any potential operational issues or constraints and ensure there is sufficient residual capacity to accommodate the additional site-generated traffic.

Based on the observed existing weekday PM peak hour conditions there were no operational issues identified. Delay times at the stop-controlled intersections along Ochterloney appeared to be within an acceptable range and the longest vehicle queue at the Ochterloney Street / King Street intersection was observed to be three vehicles for a brief period of time. These conditions suggest there is residual vehicle capacity along the study area streets and intersections.

The following traffic volume impacts are expected as a result of the proposed development:

- Since the proposed main site access will connect to Edward Street, it is assumed that the majority of the site-generated trips will use either Edward Street (to/from Ochterloney Street) and North Street (to/from Alderney Drive) to access the site. The two-way peak hour volumes using both Edward and North streets during the weekday afternoon peak hour are expected to be about 50 vph. This equates to an average vehicle increase of less than one vehicle per minute. It should be noted that only a small portion of these trips are likely to use King Street due to the one-way flow on North Street between Edward and King Streets.
- The 11 new PM peak hour trips generated by the 14 townhomes that will be using the secondary access will have a negligible impact on the existing traffic volume currently using King Street.

Based on these findings it was determined there is some residual capacity available on the study area road network to accommodate future traffic growth including the forecast site-generated traffic associated with the 180-unit development.

## CONCLUSIONS & RECOMMENDATIONS

The following conclusions were gleaned from the traffic impact assessment of the proposed 180-unit residential development on King Street:

- A sightline review was carried out to ensure minimum stopping sight distance (SSD) was available at the proposed secondary access to King Street. The operating speeds are likely less than 50 km/h but this was used as the minimum criteria. The available sightlines along King Street to the south met the minimum 65m requirement.
- The proposed 180-unit residential development is forecast to generate a total of 94 trips (19 inbound and 75 outbound) and 114 trips (73 inbound and 41 outbound) during the weekday AM and PM peak hours, respectively.
- There are two site accesses proposed. The main access will serve the Apartment and Stacked Townhome units including a total of 103 vehicle trips during the weekday PM peak (67 inbound and 36 outbound). In addition, the secondary access on King Street – assumed to be located opposite Church Street – will serve the 14 townhome units and the associated 11 vehicle trips (6 inbound and 5 outbound). Given the sight line limitation created by the crest vertical curve on King Street, it is recommended that this access have a single driveway connecting to King Street serving all 14 units.
- The site-generated trips using the main access are expected to travel along either Edward Street to move to/from Ochterloney Street or North Street to move to/from Alderney Drive. The two-way peak hour volumes using both Edward and North streets during the weekday afternoon peak hour are expected to be about 50 vph. This equates to an average vehicle increase of less than one vehicle per minute.

## CLOSING

In summary, the traffic generated by the proposed development is expected to have a marginal and acceptable level of impact on the study area roadway system. Based on the qualitative review it is recommended that:

- The site accesses for the proposed 180-unit residential development be designed following HRM access design guidelines with at least one inbound and one outbound lane and that appropriate corner clearances and sight triangles are provided. Where appropriate, the design must also accommodate large service vehicles and emergency services vehicles.
- All signage and lane markings should be installed following the Transportation Association of Canada's (TAC) Manual of Uniform Traffic Control Devices for Canada (MUTCDC) guidelines.

I would be happy to provide you with additional information or clarification regarding these matters and can be reached anytime by phone at (902) 266-9436 or by email at [jcopeland@griffininc.ca](mailto:jcopeland@griffininc.ca).

Sincerely,

**Original Signed**

**Original Signed**

**James J. Copeland, P.Eng.**  
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