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**Chebucto Community Council**  
**July 4, 2011**

**TO:** Councillor Walker and Members of Chebucto Community Council

**SUBMITTED BY:** Krista Tidwell  
for A. Ellinor Williams, Chair, Halifax Watershed Advisory Board

**DATE:** May 2, 2011

**SUBJECT:** **Case 16783: Application by Clayton Developments Limited for a Stage II development agreement for Block B, Washmill Lake Drive, Halifax to allow for four multi-unit residential buildings totalling 350 units**

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**ORIGIN**

Halifax Watershed Advisory Board (HWAB) meeting of April 20, 2011.

**RECOMMENDATION**

In considering the application of Case 16783 the Halifax Watershed Advisory Board recommends that:

1. The slopes around the swamps be maintained or returned to a vegetated state.
2. Results of water monitoring tests be provided to the Halifax Watershed Advisory Board.
3. The proposal be approved, as presented.

## **BACKGROUND**

At the April 20, 2011 meeting of the Halifax Watershed Advisory Committee staff presented an application submitted by Clayton Developments Limited to enter into a stage II development agreement to permit the development of 360 residential units through 4 multiple unit buildings.

Further information can be reviewed within the staff memorandum dated April 20, 2011.

## **DISCUSSION**

Board members stated they were pleased with the proposal, specifically with the management of sulphide bearing slate and the measures taken to control run-off by mitigating peak flows and to maintain the quality of water leaving the site.

## **BUDGET IMPLICATIONS**

There are no budget implications. The costs to process this planning application can be accommodated within the proposed 2011/12 operating budget for C310 Planning & Applications.

## **FINANCIAL MANAGEMENT POLICIES/BUSINESS PLAN**

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Project and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Project and Operating reserves, as well as any relevant legislation.

## **COMMUNITY ENGAGEMENT**

The Halifax Watershed Advisory Board is an Advisory Committee to Community Council and Regional Council, and is comprised of eight volunteer citizens and two Councillors.

## **ALTERNATIVES**

None.

## **ATTACHMENTS**

1. Staff Memorandum dated April 20, 2011

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A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/cagenda.html> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Prepared by: Krista Tidgwell, Legislative Assistant, Municipal Clerks Office, 490-6519

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Halifax, Nova Scotia  
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## MEMORANDUM

To: Chair and Members of Halifax Watershed Advisory Board

From: Jillian MacLellan, Planner

Date: April 20, 2011

Subject: **Case 16783: Application by Clayton Developments Limited for a Stage II development agreement for Block B, Washmill Lake Drive, Halifax to allow for four multi-unit residential buildings totalling 360 units**

### Synopsis of Proposal:

A planning application has been submitted to enter into a stage II development agreement to permit the development of 360 residential units through 4 multiple unit buildings. Each building will be 12 stories and will contain 90 units. An additional building (the clubhouse) is proposed to provide amenity space for the 4 buildings.

A stage I development agreement for this property was approved by Chebucto Community Council in January 2010. The Stage I agreement discusses the layout of Blocks for subdivision and discusses permitted uses on the lands. The proposed Stage II agreement discusses the specific location of proposed buildings, specific uses permit and the specific designs of the proposed buildings and site.

### Site Features:

- Vacant Site
- Approximately 19 hectares in size
- Street access from Washmill Extension
- Site contains 2 wet areas located on the south and western portions of the property.
- There are no watercourses shown on the property.

### Planning Process:

The property is zoned schedule K in the Land Use Bylaw (LUB) for Halifax Mainland and designated Residential Environments in the Municipal Planning Strategy (MPS) for Halifax. The property is also designated Urban Settlement in the Regional Plan.

In most cases the development agreement is contained within in one document, however, properties zoned schedule K in the Halifax Mainland LUB are required to have a Stage I and Stage II agreement. The Stage I agreement provides a more tentative plan and focuses on the overall theme of the area. It

provides a layout for lots, the types of use permitted and criteria for design. The Stage I Agreement requires public consultation through a public hearing before council can make their decision.

The Stage II agreement is much more specific. It deals with each lot individually and provides detailed requirements, such as building setback and height requirements, landscaping plans and specific uses. As the general intent for land use was dealt through the Stage I agreement the Stage II Agreement requires approval through resolution by council, which does not involve a public hearing.

**Further Details on the Proposal:**

As shown on the proposed site plan and proposed site/stormwater management plan, the proposed development includes the following:

- Each lot is to be serviced by municipal sewer and water;
- The proposed development does not involve the alteration of existing wetlands;
- Parkland dedication will include a community park located on Block G with a six foot wide secondary trail system;
- Surrounding uses are mainly residential;
- The bedrock of this area is of the Cunard Formation of the Halifax Group. Cunard Formation slates are typically sulphide bearing. Any disturbance must be in accordance with the *Sulphide Bearing Material Disposal Regulations*.

**Input Sought from the Halifax Watershed Advisory Board:**

Part 5.1.1 (a) and (b) of the Stage I Development Agreement requires the Erosion and Sedimentation Control Plan and the Subdivision Grading Plan to be provided to the Halifax Watershed Advisory Board for information purposes. Further to this staff seek the Board's input with respect to the potential impact of this development on the wetlands located on the subject property. HWAB's recommendation and specific comments will be included in the staff report to Chebucto Community Council.

**Attachments:**

- Stage I Development Agreement
- Proposed Site Servicing Schematic ;
- Proposed Site Grading / Limits of Disturbance Schematic;
- Proposed Erosion and Sedimentation Control Schematic;
- Proposed Stormwater Management Schematic
- Proposed Park Grading Plan
- Proposed Slope Management Plan
- Air Photo

FEB 18 2010

THIS STAGE 1 DEVELOPMENT AGREEMENT made this 10<sup>th</sup> day of February, 2010,

BETWEEN:

**CLAYTON DEVELOPMENTS LIMITED, and  
SHAW GROUP LIMITED**

Two bodies corporate, in the Province of Nova Scotia  
(hereinafter called the Developer)

OF THE FIRST PART

-and-

**HALIFAX REGIONAL WATER COMMISSION**

A body corporate, in the Province of Nova Scotia  
(hereinafter called "Halifax Water")

OF THE SECOND PART

-and-

**HALIFAX REGIONAL MUNICIPALITY,**

A municipal body corporate, in the Province of Nova Scotia  
(hereinafter called the "Municipality")

OF THE THIRD PART

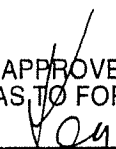
WHEREAS the Developer is the registered owner of certain undeveloped lands to the south of Blocks GP04, GP05 and GP06 Greenpark Close (being Lot 7C, currently identified as PID 41072075; and a parcel currently identified as PID 41072067), Halifax, which said lands are more particularly described in Schedule A to this Agreement (hereinafter called the "Clayton Lands"); and

AND WHEREAS Halifax Water is the registered owner of certain undeveloped lands to the south of Regency Park Drive and Main Avenue on Geizer Hill Road (being Lot 7D, currently identified as PID 41294133; a parcel currently identified as PID 41177379; a parcel currently identified as PID 41177387; and a portion of PID 4177403), Halifax, which said lands are more particularly described in Schedule A to this Agreement (hereinafter called the "Halifax Water Lands");

AND WHEREAS the Municipality is the registered owner of certain undeveloped lands at 110 Greenpark Close (being Block GP04, currently identified as PID 41093071) and to the south of Regency Park Drive and Main Avenue on Geizer Hill Road (being Parcel R-2, currently identified as PID 40576761), which said lands are more particularly described in Schedule A to this Agreement (hereinafter called the "Municipal Lands")

AND WHEREAS the Clayton Lands, the Halifax Water Lands and the Municipal Lands between Highway 102 and Regency Park Drive, Halifax, which said lands are more particularly

APPROVED  
AS TO FORM

  
Municipal Solicitor

described in Schedule A to this Agreement, will be developed in concert as Clayton Park West Phase 5 (hereinafter called the "Lands");

AND WHEREAS the Developer, the Municipality and Halifax Water are in the process of entering into Agreements of Purchase and Sale which will redistribute portions of the Clayton Park West Phase 5 Lands among the three parties with the understanding that the Developer will seek approval through the Chebucto Community Council of Halifax Regional Municipality for a Stage I Development Agreement for a mixed commercial / residential development for the entirety of the Clayton Park West Phase 5 Lands;

AND WHEREAS the Developer, with the understanding of the other parties to this Agreement, has requested that the Municipality enter into a Stage I Development Agreement to allow for the primary design and planning of a mixed commercial / residential development on the Clayton Park West Phase 5 Lands and that the Municipality discharge the previous Stage I agreement which applies to a portion of the Lands (Municipal Case #00399) pursuant to the provisions of the *Halifax Regional Municipality Charter* and pursuant to the Policy 3.3 of the Halifax Municipal Planning Strategy and Section 68 of the Land Use By-law for Mainland Halifax;

AND WHEREAS the Chebucto Community Council of Halifax Regional Municipality approved this request at a meeting held on January 4, 2010, referenced as Municipal Case Number 01304, and at the same meeting, approved the discharge of that portion of the existing Stage I development agreement as it applies to Block GP-04 (PID# 41093071), Lot 7C 9 (PID# 41072075) and a parcel currently identified as PID 41072067 and filed in the Registry of Deeds in Book No. 6999, Pages 1222-1232, said discharge to take effect upon the registration of this agreement;

THEREFORE in consideration of the benefits accrued to each party from the covenants herein contained, the Parties agree as follows:

## **PART 1: GENERAL REQUIREMENTS AND ADMINISTRATION**

### **1.1 Applicability of Agreement**

- 1.1.1 The Developer agrees that the Lands shall be subdivided, consolidated, developed and used only in accordance with and subject to the terms and conditions of this Agreement.

### **1.2 Applicability of Land Use By-law and Subdivision By-law**

- 1.2.1 Except as otherwise provided for herein, the development, subdivision and use of the Lands shall comply with the requirements of the Halifax Mainland Land Use By-law and the Regional Subdivision By-law, as may be amended from time to time.

### **1.3 Applicability of Other By-laws, Statutes and Regulations**

- 1.3.1 Further to Section 1.2, nothing in this Agreement shall exempt or be taken to exempt the Developer, lot owner or any other person from complying with the requirements of any by-law of the Municipality applicable to the Lands (other than the Land Use By-law and the Regional Subdivision By-law to the extent varied by this Agreement or any subsequent Stage II Development Agreement for the Lands), or any statute or regulation of the Provincial or Federal government, and the Developer or lot owner agrees to observe and comply with all such laws, by-laws and regulations, as may be amended from time to time, in connection with the development and use of the Lands.

- 1.3.2 The Developer shall be responsible for securing all applicable approvals associated with the on-site and off-site servicing systems required to accommodate the development, including but not limited to sanitary sewer system, water supply system, stormwater sewer and drainage system, and utilities. Such approvals shall be obtained in accordance with all applicable by-laws, standards, policies, and regulations of the Municipality and other approval agencies. All costs associated with the supply and installation of all servicing systems and utilities shall be the responsibility of the Developer. All design drawings and information shall be certified by a Professional Engineer or appropriate professional as required by this Agreement or other approval agencies.

### **1.4 Conflict**

- 1.4.1 Where the provisions of this Agreement conflict with those of any by-law of the Municipality applicable to the Lands (other than the Land Use By-law and the Regional Subdivision By-law to the extent varied by this Agreement or any subsequent Stage II Development Agreement for the Lands) or any Provincial or Federal statute or regulation, the higher or more stringent requirements shall prevail.
- 1.4.2 Where the written text of this Agreement conflicts with information provided in the Schedules attached to this Agreement, the written text of this Agreement shall prevail.

- 1.4.3 Where metric values conflict with imperial values within the written text of this Agreement, the metric values shall prevail.

## **1.5 Costs, Expenses, Liabilities and Obligations**

- 1.5.1 The Developer shall be responsible for all costs, expenses, liabilities and obligations imposed under or incurred in order to satisfy the terms of this Agreement and all Federal, Provincial and Municipal laws, by-laws, regulations and codes applicable to the Lands.

## **1.6 Provisions Severable**

- 1.6.1 The provisions of this Agreement are severable from one another and the invalidity or unenforceability of one provision shall not affect the validity or enforceability of any other provision.

## **PART 2: DEFINITIONS**

### **2.1 Words Not Defined under this Agreement**

- 2.1.1 All words unless otherwise specifically defined herein shall be as defined in the applicable Land Use By-law and the Regional Subdivision By-law.

## **PART 3: USE OF LANDS, SUBDIVISION AND DEVELOPMENT PROVISIONS**

### **3.1 Schedules**

- 3.1.1 The Developer shall not develop or use the Clayton Park West Phase 5 Lands for any purpose other than a mixed commercial / residential development with public open space, which in the opinion of the Development Officer is in conformance with the following Schedules attached to this Agreement:

Schedule A	Legal Description of the Lands
Schedule B	Concept Plan and Land Use / Density Table
Schedule C	Architectural Guidelines
Schedule D	Conceptual Subdivision Plan, Block A

- 3.1.2 The Parties agree that Schedule B of this Agreement contains the proposed concept plan for the development of the Lands, and further agree that the aforementioned concept plan shall form the basis for negotiation and approval of any Stage II Agreement.
- 3.1.3 Development permits shall only be granted for the Lands after approval of Stage II Development Agreements by Chebucto Community Council and registration of the Stage II Development Agreements.



### **3.2 General Description of Land Use**

3.2.1 The uses of the Lands permitted by this Agreement are:

- (a) Multiple unit dwellings;
- (b) Townhouses;
- (c) Minor commercial uses permitted in the C-2A zone;
- (d) Institutions permitted in the P zone;
- (e) Parkland/ Open space uses;
- (f) Municipal water utilities;
- (g) Accessory uses to the foregoing.

### **3.3 Detailed Provisions For Land Use**

3.3.1 Development on the Lands shall be in conformance with Schedule B.

3.3.2 In total, the combined Stage II Development Agreements for Blocks A, B, C and D shall include at least three types of land uses from the following list:

- (a) Multiple unit dwellings;
- (b) Townhouses;
- (c) Minor commercial uses; and
- (d) Institutional uses.

3.3.3 A minimum of 35 townhouse units shall be included as part of the Stage II Development Agreement for at least one of Blocks B, C or D.

3.3.4 A minimum of 1000 square metres (10,764 square feet) of either minor commercial or institutional land uses or combination thereof shall be included as part of the Stage II Development Agreement for at least one of Blocks B, C or D.

3.3.5 Block E will remain the lands of Halifax Water and is not for development. Development density from Block E has been re-allocated to Blocks A through D.

3.3.6 Block F will remain the lands of Halifax Water for municipal water utilities. Development density from Block F has been re-allocated to Blocks A through D.

3.3.7 Block G will be deeded to the Municipality for public open space. Development density from Block G has been re-allocated to Blocks A through D.

3.3.8 Block H will remain the lands of the Municipality and is not for development. Development density from Block H has been re-allocated to Blocks A through D.

3.3.9 Block A may be subdivided into two parcels so that each resultant parcel has frontage on Greenpark Close, as generally shown on Schedule D, notwithstanding that the resultant

parcels will not comply with the lot frontage requirements of the Land Use By-law. The subdivision may take place prior to Stage II approval.

### **3.4 Density**

3.4.1 Development density on the Lands shall not exceed 1866 persons, based on a maximum of 30 persons per acre.

3.4.2 Density is to be calculated by the theoretical population generated on the basis of:

- (a) 1 person for each bachelor unit;
- (b) 2 persons for each one-bedroom unit;
- (c) 2.25 persons for each other apartment-style unit; and
- (d) 3.35 persons for each townhouse unit.

3.4.3 For the purposes of calculating density, one bedroom plus den units shall be considered to be the same as one-bedroom units.

3.4.4 Individual Stage II Development Agreements may develop at higher densities than 30 persons per acre, provided that the overall limit of 1866 persons as specified in Section 3.4.1 is not exceeded.

3.4.5 Density tracking calculations shall be provided to the Municipality with each application for a Stage II Development Agreement and to the Development Officer with each application for a permit.

### **3.5 Phasing and Collector Street**

3.5.1 (a) The first phase of development shall include the subdivision of Block A with access from Greenpark Close as generally shown on Schedule D.

(b) The parties agree to design and construct a public collector street referred to as 'Washmill Extension' in this Agreement whereby (as is further detailed in the Purchase and Sale Agreement for the subject lands):

- (i) The Municipality shall design and construct the street from Washmill Lake Court in Bayers Lake Business Park to Point X, as shown on Schedule B, including the underpass crossing Highway 102; and
- (ii) The Developer shall design and construct the street from Regency Park Drive in the Mount Royale Subdivision to Point X, as shown on Schedule B.

(c) Construction of the Developer's portion of the street shall be co-ordinated with the construction of the Municipality's portion of the street to the satisfaction of the Development Engineer.

- (d) Street construction shall include the installation of any primary or secondary services required to be constructed at the same time as the public street by either the Municipality or Halifax Water.
- 3.5.2 Notwithstanding Section 3.5.1(a), after approval of this Stage I Development Agreement, and prior to or at the time of entering into a Stage II Development Agreement for Block A, all previous Stage II and amending agreements covering Block A shall be discharged from the property.
- 3.5.3 The second phase of development shall include:
- (a) Stage II Development Agreements for Blocks B, C and D; and
  - (b) Public infrastructure required in conjunction with the Stage II Development Agreements for Blocks B, C or D.
- 3.5.4 The following items shall be specifically addressed in the relevant Stage II Development Agreement:
- (a) The first Stage II Development Agreement for any of Blocks B, C or D shall address the construction of a booster pump to Halifax Water's specifications.
  - (b) The Stage II Development Agreement for Block B shall address:
    - (i) As detailed in Section 3.7 of this Agreement, development of Block G to HRM Parkland Planning's specifications.
    - (ii) The construction of a secondary trail linking Block G to the existing HRM parkland on Greenpark Close, as required by the Stage I and Stage II Development Agreements for 247 Regency Park Drive, and as detailed in Section 3.7 of this Agreement.
    - (iii) The construction of infrastructure across Block B to the north to Halifax Water's specifications.
  - (c) The Stage II Development Agreement for Block D shall address current plans for expansion of Highway 102 by the Nova Scotia Department of Transportation and Infrastructure Renewal.
- 3.5.5 Site preparation for each phase or portion thereof shall not occur until a Stage II Development Agreement has been approved and registered, with the specific exception of any site preparation required for the construction of Washmill Extension.
- 3.5.6 All of the parties agree to allow each of the other parties to this Agreement, or their contractors, to access their respective lands for the purposes of constructing Washmill Extension.
- 3.5.7 Prior to construction of any phase or portion thereof, a Municipal Service Agreement must be signed in accordance with the Regional Subdivision By-Law and the applicable Stage I and Stage II Development Agreements.

- 3.5.8 No occupancy permit shall be issued until all pertinent infrastructure applicable to the Lands is complete, subject to the appropriate sections of the applicable Stage I and Stage II Development Agreements.

### **3.6 Subdivision of the Lands**

- 3.6.1 Subdivision applications shall be submitted to the Development Officer in accordance with the concept plan presented as Schedule B, and the Development Officer shall grant subdivision approvals for the phase or block for which approval is sought subject to and in accordance with the terms of this Agreement, any Stage II Development Agreements and the Regional Subdivision By-law, with the exception that the lot frontage requirements may be reduced to allow for the subdivision of Block A, pursuant to Section 3.3.9.

### **3.7 Park Dedication**

- 3.7.1 Upon approval and registration of a Stage II Development Agreement for Block B, the Developer shall convey the Park Dedication in the form of Land, as generally shown on Schedule B, to the Municipality.
- 3.7.2 The Developer shall convey to the Municipality a community park as generally shown on Schedule B as Block G. These lands together with the secondary trail as per Section 3.7.5 shall satisfy the park dedication required for this development.
- 3.7.3 The community park shall be useable land free of encumbrances as defined in the Regional Subdivision By-law, unless specifically agreed to in writing by the Development Officer in consultation with the Parkland Planner.
- 3.7.4 The Developer shall not undertake any work or otherwise disturb any area of proposed parkland until a Park Site Development Plan for the trail, prepared at the Developer's expense, is approved by the Development Officer in consultation with the Parkland Planner.
- 3.7.5 The Developer shall design and construct a six foot wide secondary trail system in the community park, as conceptually shown on Schedule B, which shall connect to the public trail at the rear of 247 Regency Park Drive to join the existing HRM parkland on Greenpark Close.

### **3.8 Architectural Guidelines**

- 3.8.1 Building plans included in any Stage II Development Agreement for Blocks A through D inclusive shall meet the intent and any specific requirements of the Architectural Guidelines included as Schedule C.

### **3.9 Stage II Development Agreements**

- 3.9.1 In addition to the information required by Section 68 of the Halifax Mainland Land Use

By-law, the following information, at a minimum and as deemed appropriate by the Municipality, shall be submitted with any application for a Stage II Development Agreement:

- (a) density tracking calculations;
- (b) site plans showing building footprints, lot coverage, setbacks, and land use buffers with their dimensions and specifications;
- (c) proposed building plans and elevations, showing exterior appearance including signage, architectural detailing and all construction materials;
- (d) provision and identification of useable amenity areas, as well as features, facilities and site furnishings;
- (e) landscaping plans including street trees, construction details, planting details and specifications, as well as plant lists including common and botanical names and quantities;
- (f) location and treatment of loading or service areas, mechanical units, fuel storage tanks, air conditioning units, refuse and recyclable storage facilities and utility supply facilities;
- (g) location of bicycle access routes and bicycle parking;
- (h) vehicular access and egress points, parking area layout, number of parking spaces and driveway widths and radii;
- (i) with the application for a Stage II Development Agreement for Block B, a park site development plan for the trail;
- (j) municipal services including but not limited to schematic plans for sanitary sewer, storm sewer and water supply, required easements (including location, size and purpose), utilities (including power, gas, propane, lighting, etc.) and street designs;
- (k) site disturbance plan and preliminary grading plan; and
- (l) environmental protection information, including pyritic slate issues, preliminary site drainage plan, preliminary erosion and sediment control plans and preliminary stormwater management plans.

3.9.2 Where multiple unit dwellings are proposed on Blocks B, C and D, the Developer shall provide with every Stage II Application, a Letter of Confirmation prepared by an expert in Radio Frequency emissions and mitigation which verifies that the proposed buildings comply with the Safety Code 6 guidelines of Health Canada and do not interfere with the line of sight requirements. The letter shall describe the specific areas of concern as applicable and identify, in detail, mitigation methods proposed for the buildings and the site which will address issues such as disruption of cellular telephone coverage, the impact on personal medical devices and other electronic devices, and the ability of emergency services to carry out their duties should the need arise.

3.9.3 As part of the review process for Stage II development agreements, any proposal that may impact a watercourse will be sent to the Halifax Watershed Advisory Board for their review and recommendations.

## **PART 4: STREETS AND MUNICIPAL SERVICES**

### **4.1 General Provisions**

- 4.1.1 All construction shall satisfy HRM Municipal Service Systems (MSS) Guidelines, unless otherwise provided for in this Agreement and shall receive written approval from the Development Engineer prior to undertaking the work.

### **4.2 Off-Site Disturbance**

- 4.2.1 Any disturbance to existing off-site infrastructure resulting from the development, including but not limited to, streets, sidewalks, curbs and gutters, street trees, landscaped areas and utilities, shall be the responsibility of the Developer, and shall be reinstated, removed, replaced or relocated by the Developer as directed by the Development Officer, in consultation with the Development Engineer.

### **4.4 Site Preparation in a Subdivision**

- 4.4.1 The Developer shall not commence clearing, excavation and blasting activities required for the installation of municipal services and road construction in association with a development prior to receiving final approval of the subdivision design unless otherwise permitted by the Development Officer, in consultation with the Development Engineer

### **4.5 Streets**

- 4.5.1 The street network shall be developed as generally shown on Schedule B. All street construction shall satisfy Municipal Service Systems Specifications unless otherwise provided for in this Agreement and shall receive written approval from the Development Engineer prior to undertaking the work. The Development Officer, in consultation with the Development Engineer, may give consideration to minor changes to the street network as identified in Schedule B, provided the modifications serve to maintain or enhance the intent of this Agreement and the Agreement of Purchase and Sale between the three parties to this Agreement.

### **4.6 Municipal Services**

- 4.6.1 The water distribution system shall conform with all design and construction requirements of Halifax Water.
- 4.6.2 The sanitary sewer system shall conform with all design and construction standards of the HRM Municipal Service Systems (MSS) Guidelines, unless otherwise acceptable to Halifax Water and the Development Engineer.
- 4.6.3 The Developer shall be responsible for securing all applicable approvals associated with the on-site and off-site servicing systems required to accommodate the development, including sanitary sewer system, water supply system, stormwater sewer and drainage systems, and utilities. Such approvals shall be obtained in accordance with all applicable by-laws, standards, policies, and regulations of HRM and other approval agencies, except as provided herein.

- 4.6.4 All costs associated with the supply and installation of all servicing systems and utilities shall be the responsibility of the Developer, except where agreed otherwise and outlined in the Agreement of Purchase and Sale between the three parties to this Agreement.

#### **4.7 Solid Waste Facilities**

- 4.7.1 All solid waste facilities shall be in accordance with By-law S-600 (Solid Waste Resource Collection and Disposal By-Law) as amended from time to time.

#### **4.7 Blasting**

- 4.7.1 All blasting shall be in accordance to By-law B-300 (Blasting By-Law) as amended from time to time.

- 4.7.2 No blasting activities shall occur within 100 feet of any Halifax Regional Water Commission reservoir structure or large diameter water main.

### **PART 5: ENVIRONMENTAL PROTECTION MEASURES**

#### **5.1 Stormwater Management Plans and Erosion and Sedimentation Control Plans**

- 5.1.1 Prior to the commencement of any site work on the Lands for construction of streets and services, including grade alteration or tree removal other than that required for preliminary survey purposes, or associated off-site works, the Developer shall:
- (a) Submit to the Development Officer a detailed Site Disturbance Plan, prepared, stamped and certified by a Professional Engineer indicating the sequence and phasing of construction and the areas to be disturbed or undisturbed;
  - (b) Submit to the Development Officer a detailed Erosion and Sedimentation Control Plan prepared, stamped and certified by a Professional Engineer in accordance with the Erosion and Sedimentation Control Handbook for Construction Sites as prepared and revised from time to time by Nova Scotia Environment. Notwithstanding other Sections of this Agreement, no work is permitted on the Lands until the requirements of this clause have been met and implemented. The Erosion and Sedimentation Control Plan shall indicate the sequence of construction, all proposed detailed erosion and sedimentation control measures and interim stormwater management measures to be put in place prior to and during construction. The Erosion and Sedimentation Control Plan shall be provided to the Halifax Watershed Advisory Board for information purposes; and,
  - (c) Submit to the Development Officer a detailed Subdivision Grading Plan prepared, stamped and certified by a Professional Engineer, which shall include an appropriate stormwater management system. The Subdivision Grading Plan shall identify structural and vegetative stormwater management measures, which may include infiltration, retention, and detention controls, wetlands, vegetative swales, filter strips, and buffers that will minimize adverse impacts on receiving watercourses during and after construction. The Subdivision Grading Plan shall be provided to the Halifax Watershed Advisory Board for information purposes.

- 5.1.2 In general, these plans will be completed as part of the Stage II Development Agreement, unless any site work is required on the Lands for construction of Washmill Extension and associated services.

## **5.2 Stormwater Management System**

- 5.2.1 The Developer agrees to construct at his own expense the Stormwater Management System pursuant to Subsection 5.1.1(c). The Developer shall provide certification from a Professional Engineer that the system, or any phase thereof, has been constructed in accordance with the approved design.

## **5.3 Failure to Conform to Plans**

- 5.3.1 If the Developer fails at any time during any site work or construction to fully conform to the approved plans as required under this Agreement, the Municipality shall require that all site and construction works cease, except for works which may be approved by the Development Engineer to ensure compliance with the environmental protection measures.

## **5.4 Potential of acid-bearing slates**

- 5.4.1 If development of the Lands (including parkland, if applicable) may involve the disturbance of potentially sulphide bearing material (Halifax Slates) exceeding 500 cubic meters, the Developer shall comply with the requirements of Nova Scotia Environment, which include an initial screening of the bedrock on the site to be performed in accordance with the sulphite bearing material disposal regulations.

# **PART 6: AMENDMENTS**

## **6.1 Substantive Amendments**

- 6.1.1 Amendments to any matters not identified under Section 6.2 shall be deemed substantive and may only be amended in accordance with the approval requirements of the *Halifax Regional Municipality Charter*.

## **6.2 Non-Substantive Amendments**

- 6.2.1 The following items are considered by the parties to be not substantive and may be amended by resolution of Council:
- (a) Changes to the proposed road network;
  - (b) Changes to the proposed phasing, provided that the needs of the Municipality and Halifax Water with regard to infrastructure are met;
  - (c) Changes to the proposed mix of land uses, provided that at least three land uses are provided over Blocks A through D inclusive;
  - (d) Changes to the proposed open space;
  - (e) The granting of an extension to the date of commencement of construction as identified in Section 7.3 of this Agreement; and
  - (f) The length of time for the completion of the development as identified in Section 7.4 of this Agreement.



## **PART 7: REGISTRATION, EFFECT OF CONVEYANCES AND DISCHARGE**

### **7.1 Registration**

- 7.1.1 A copy of this Agreement and every amendment or discharge of this Agreement shall be recorded at the Registry of Deeds or Land Registry Office at Halifax, Nova Scotia and the Developer shall incur all costs in recording such documents.

### **7.2 Subsequent Owners**

- 7.2.1 This Agreement shall be binding upon the parties thereto, their heirs, successors, assigns, mortgagees, lessees and all subsequent owners, and shall run with the Lands which is the subject of this Agreement until this Agreement is discharged by Council.
- 7.2.2 Upon the transfer of title to any lot(s), the subsequent owner(s) thereof shall observe and perform the terms and conditions of this Agreement to the extent applicable to the lot(s).

### **7.3 Commencement of Development**

- 7.3.1 In the event that the Developer has not entered into a Stage II Development Agreement or construction on the Lands has not commenced within two (2) years from the date of registration of this Agreement at the Registry of Deeds or Land Registry Office, as indicated herein, the Agreement shall have no further force or effect.
- 7.3.2 For the purposes of this section, commencement of construction shall mean the pouring of the footings for the foundation of a building or the acceptance of a street by the Municipality, whichever happens first.
- 7.3.3 For the purpose of this section, Council may consider granting an extension of the commencement of development time period through a resolution under Section 6.2, if the Municipality receives a written request from the Developer at least sixty (60) calendar days prior to the expiry of the commencement of development time period.

### **7.4 Completion of Development**

- 7.4.1 If the Developer fails to complete the development after ten (10) years from the date of registration of this Agreement at the Registry of Deeds or Land Registration Office Council may review this Agreement, in whole or in part, and may:
- (a) retain the Agreement in its present form;
  - (b) negotiate a new Agreement; or
  - (c) discharge this Agreement.
- 7.4.2 Upon the completion of the whole development or complete phases of the development, Council may review this Agreement, in whole or in part, and may:
- (a) retain the Agreement in its present form;
  - (b) negotiate a new Agreement;
  - (c) discharge this Agreement; or

- (d) for those portions of the development which are completed, discharge this Agreement and apply appropriate zoning pursuant to the Halifax Municipal Planning Strategy and Land Use By-law for Halifax Mainland, as may be amended from time to time.

## **PART 8: ENFORCEMENT AND RIGHTS AND REMEDIES ON DEFAULT**

### **8.1 Enforcement**

8.1 The Developer agrees that any officer appointed by the Municipality to enforce this Agreement shall be granted access onto the Lands during all reasonable hours without obtaining consent of the Developer. The Developer further agrees that, upon receiving written notification from an officer of the Municipality to inspect the interior of any building located on the Lands, the Developer agrees to allow for such an inspection during any reasonable hour within twenty four hours of receiving such a request.

### **8.2 Failure to Comply**

8.2.1 If the Developer fails to observe or perform any covenant or condition of this Agreement after the Municipality has given the Developer fourteen days written notice of the failure or default, except that such notice is waived in matters concerning environmental protection and mitigation, then in each such case:

- (a) The Municipality shall be entitled to apply to any court of competent jurisdiction for injunctive relief including an order prohibiting the Developer from continuing such default and the Developer hereby submits to the jurisdiction of such Court and waives any defense based upon the allegation that damages would be an adequate remedy;
- (b) The Municipality may enter onto the Lands and perform any of the covenants contained in this Agreement or take such remedial action as is considered necessary to correct a breach of the Agreement, whereupon all reasonable expenses whether arising out of the entry onto the Lands or from the performance of the covenants or remedial action, shall be a first lien on the Lands and be shown on any tax certificate issued under the Assessment Act;
- (c) The Municipality may by resolution discharge this Agreement whereupon this Agreement shall have no further force or effect and henceforth the development of the Lands shall conform with the provisions of the Land Use By-law; and/or
- (d) In addition to the above remedies, the Municipality reserves the right to pursue any other remediation under the *Halifax Regional Municipality Charter* or Common Law in order to ensure compliance with this Agreement.

WITNESS that this Stage I Development Agreement, made in quadruplicate, was properly executed by the respective Parties on this 15<sup>th</sup> day of February, 2010.  
for March

SIGNED, SEALED AND DELIVERED  
in the presence of

X. Hantler

CLAYTON DEVELOPMENTS LIMITED/  
SHAW GROUP LIMITED

Per: Richard Muller

Per: Carol Boudier

SIGNED, SEALED AND DELIVERED  
in the presence of

James Tremblay

HALIFAX REGIONAL WATER  
COMMISSION

Per: William Russell, CHAIR

Per: John J. ...

SEALED, DELIVERED AND  
ATTESTED to by the proper  
signing officers of Halifax Regional  
Municipality duly authorized  
in that behalf in the presence of

Kelley MacLennan  
Witness

HALIFAX REGIONAL MUNICIPALITY

Per: Peter J. Kelly  
MAYOR

Per: C. ...  
MUNICIPAL CLERK

Sera Gless  
Witness

## Schedule "A"

### PID 41294133 "Halifax Water Lands"

ALL that certain lot, piece or parcel of land situate, lying and being at Geizer's Hill, Fairview in the County of Halifax and Province of Nova Scotia, being and comprising all that lot 7D as shown on a plan of lands at Geizer's Hill, Fairview, Halifax County, N.S. owned by Winnifred Hilchie, the said plan bearing date the 17th day of May in the year 1955 with additions dated the 27th day of June in the year 1956 and made and signed by J.D. McKenzie, P.L.S., the said Lot 7D being more particularly bounded and described as follows; viz:

BEGINNING on the northern boundary line of the Geizer's Hill Road Reservation at that point thereon at which the said northern boundary line of the Geizer's Hill Road Reservation is intersected by the eastern boundary line of Lot No. 6, granted by the Crown to Christian Pytch and now owned by the Public Service Commission;

THENCE to run eastwardly along the said northern boundary line of the Geizer's Hill Road Reservation, six hundred and eighty-two feet and five tenth parts of one foot unto the intersection therewith of the western boundary line of that lot conveyed by Edward and William Clayton to Joseph B. Pierson by Deed bearing date the 30th day of July in the year 1923 and recorded in the office of the Registrar of Deeds at Halifax in Book 570, Page 153, as shown on the said plan;

THENCE to run northwardly along the said western boundary line of the last named lot, one thousand two hundred and sixty-three feet, unto the northwestern angle thereof, as shown on the said plan;

THENCE to run westwardly along the westwardly prolongation of the northern boundary line of the said lot conveyed by Edward and William Clayton to Joseph B. Pierson, six hundred and eighty-two feet and five tenth parts of one foot unto the said eastern boundary line of Lot No. 6 granted to Christian Pytch;

THENCE to run southwardly along the said eastern boundary line of Lot No. 6, one thousand two hundred and forty-eight feet unto the place of beginning;

SUBJECT TO A RIGHT OF WAY unto the said Grantor, her Heirs and Assigns, at all times for all lawful purposes on foot or with vehicles, over and upon that portion of the said lot 7D more particularly bounded and described as follows; viz:

BEGINNING on the northern boundary line of the Geizer's Hill Road Reservation at that point thereon at which the said northern boundary line of the Geizer's Hill Road Reservation is intersected by the western boundary line of that lot conveyed by Edward and William Clayton to Joseph B. Pierson by Deed bearing date the 30th day of July in the year 1923 and recorded in the office of the Registrar of Deeds at Halifax in Book 570, Page 153;

THENCE to run northwardly along the said western boundary line of the last named lot, one thousand two hundred and sixty-three feet unto the northwestern angle thereof, as shown on the said plan;

THENCE to run westwardly along the westwardly prolongation of the northern boundary line of the said lot conveyed by Edward and William Clayton to Joseph B. Pierson, thirty-three feet;

THENCE to run southwardly, parallel to the said western boundary line of the lot conveyed by Edward and William Clayton to Joseph B. Pierson, one thousand two hundred and sixty-three feet, more or less, unto the said northern boundary line of the Geizer's Hill Road Reservation;

THENCE to run eastwardly along the said northern boundary line of the Geizer's Hill Road Reservation, thirty-three feet unto the place of beginning.

SAVING AND EXCEPTING the lands expropriated for the Bi-Centennial Drive, by Expropriation No. 1058, filed August 28, 1959, and by Deed of Release recorded in Book 1738 at Page 943, on May 29, 1961; and also excepting the lands lying to the south of the Bi-Centennial Drive, which were included in an Expropriation recorded in Book 3868 at Page 297, on July 10, 1984.

The parcel is exempt from the requirement for subdivision approval under the Municipal Government Act because it is resulting from an expropriation.

**PID 40576761 "Municipal Lands"**

Civic Address: Geizer Hill Road, Halifax, Nova Scotia  
Municipality/County: Halifax Regional Municipality/Halifax County  
Designation of Parcel on Plan: Parcel R-2  
Title of Plan: Lands of Her Majesty the Queen in the right of Her Province of Nova Scotia  
Registration County: Halifax County  
Registration No. of Plan: Book 5040 Page 927 Drawer 288  
Date of Plan: 1985-10-25  
Registration Date: 1991-02-01

Excepting and Reserving with from the above described lands to the Grantor and the Nova Scotia Power Corporation and to their and each of their successors and assigns a perpetual privilege, right and license of maintaining lines of poles or towers and wires with all necessary foundations, anchors and guy wires, (hereinafter referred to as the power lines), existing on the above described lands for the purpose of conveying electric power and energy and any and all other communication signals over and across the said lands.

Together with the perpetual privilege, right and license to clear or removal all trees, obstructions and impediments that may be deemed a potential hazard to said power lines and to enter upon and across said lands from time to time and at all times with vehicles, machinery, equipment and materials as deemed expedient for all purposes whatsoever, in fulfillment of the above reserved privileges, right and licenses.

Compliance with MGA: The parcel is exempt from the requirement for subdivision approval under the Municipal Government Act because 268(2)(c) and (e) resulting from a disposition of land by her Majesty the Queen in Right of the Province and an acquisition of land by a municipality for municipal purposes.

**PID 41072067 "Clayton Lands"**

ALL that certain lot, piece or parcel of land lying and being to the south of Greenpark Close, Halifax, being shown as Remaining Lands of The Shaw Group Limited, on a Plan of Survey of Blocks GP04 & GP05, Clayton Park West - Phase 4J, Subdivision and Consolidation of Lands Conveyed to Clayton Developments Limited and Lands Acquired by The Shaw Group Limited, Greenpark Close and Bicentennial Drive - Route No. 102, Halifax, Halifax County, Nova Scotia, signed on December 10th, 2002 by Carl K. Hartlen, N.S.L.S. and filed at the Registry of Deeds at Halifax as Plan No. 35602, Drawer 390; said Remaining Lands of The Shaw Group Limited being more particularly bounded and described as follows:

BEGINNING at a point on the southeastern boundary of Block GP05, at a point 34.80 feet on a bearing of N 56 degrees 37 minutes 09 seconds E from the southern corner of said Block GP05, on the southwestern boundary of said Remaining Lands;

THENCE N 56 degrees 37 minutes 09 seconds E for a distance of 395.20 feet to a point marking the eastern corner of said Block GP05;

THENCE northeasterly, following the eastern boundary of Block GP06 for a distance of 357 feet, more or less, to a point on the western boundary of Lot B (Remainder), being the northern corner of said Remaining Lands;

THENCE southeasterly, following the southwestern boundary of Lot B (Remainder) and Lot A, for a distance of 825 feet, more or less, to the northwestern boundary of lands now or formerly owned by the Halifax Regional Water Commission;

THENCE southwesterly, following said northwestern boundary of lands now or formerly of the Halifax Regional Water Commission, for a distance of 636 feet, more or less, to the northeastern boundary of remaining lands of Clayton Developments Limited;

THENCE northwesterly, following the northeastern boundary of said remaining lands of Clayton Developments Limited, for a distance of 569 feet, more or less, to the place of beginning.

Containing, by estimation, 9.0 acres, more or less.

ALL bearings are Nova Scotia Coordinate Survey System grid bearings and are referred to Central Meridian, 64 degrees 30 minutes West.

MGA: The parcel originates with an approved plan of subdivision that has been filed under the Registry Act or registered under the Land Registration Act at the Land Registration Office for the registration district of Halifax as plan or document number 35602, drawer 390, being shown thereon as the Remaining Lands of The Shaw Group Limited.

**PID 41072075 "Clayton Lands"**

ALL that certain lot, piece or parcel of land lying and being to the south of Greenpark Close, Halifax, being shown as Lot 7C (Remainder) of Clayton Developments Limited, on a Plan of Survey of Blocks GP04 & GP05, Clayton Park West - Phase 4J, Subdivision and Consolidation of Lands Conveyed to Clayton Developments Limited and Lands Acquired by The Shaw Group Limited, Greenpark Close and Bicentennial Drive - Route No. 102, Halifax, Halifax County, Nova Scotia, signed on December 10th, 2002 by Carl K. Hartlen, N.S.L.S. and filed at the Registry of Deeds At Halifax as Plan No. 35602, Drawer 390; said Lot 7C (Remainder) of Clayton Developments Limited being more particularly bounded and described as follows:

BEGINNING at a point on the eastern corner of Block GP04, as shown on said plan;

THENCE S 56 degrees 37 minutes 09 seconds W along the southeastern boundary of said Block GP04 for a distance of 390.27 feet to a point;

THENCE southerly, on a curve to the right having a radius of 687.00 feet, for an arc distance of 322.29 feet to a point on the eastern boundary of the Bicentennial Drive (Highway 102);

THENCE southeasterly, following the eastern boundary of said Bicentennial Highway, for a distance of 263 feet, more or less, to the northwestern boundary of lands now or formerly owned by the Halifax Regional Water Commission;

THENCE northeasterly, following said northwestern boundary of lands now or formerly of the Halifax Regional Water Commission, for a distance of 604 feet, more or less, to the southwestern boundary of remaining lands of The Shaw Group Limited;

THENCE northwesterly, following the southwestern boundary of said remaining lands of The Shaw Group Limited, for a distance of 569 feet, more or less, to a point on the southeastern boundary of Block GP05;

THENCE S 56 degrees 37 minutes 09 seconds W along the southeastern boundary of said Block GP05 for a distance of 34.80 feet to the point of beginning.

Containing, by estimation, 7.8 acres, more or less.

ALL bearings are Nova Scotia Coordinate Survey System grid bearings and are referred to Central Meridian, 64 degrees 30 minutes West.

**BENEFIT:**

TOGETHER WITH a Right of Way over lands now or formerly owned by the Halifax Regional Water Commission, as defined and described in the Deed in Book 2190 at Page 302, running northerly from the Geizers Hill Road to the southern boundary of the above described parcel and being shown on Plan 3183 in drawer 26.

MGA: The parcel originates with an approved plan of subdivision that has been filed under the Registry Act or registered under the Land Registration Act at the Land Registration Office for the registration district of Halifax as plan or document number 35602, drawer 390, being shown thereon as the Lot 7C (Remainder), Clayton Developments Limited.

**PID 41093071 "Municipal Lands"**

Municipality/County: Halifax Regional Municipality/Halifax County  
Designation of Parcel on Plan: Block GP04  
Title of Plan: Plan of Survey of Blocks GP04 & GP05 Clayton Park West - Phase 4J  
Registration County: Halifax County  
Registration No. of Plan: Plan No. 35602 Drawer No. 390  
Date of Plan: 2002-12-10  
Approved Date of Plan: 2003-02-14

Subject to Restrictive Covenants as found in a deed recorded on April 15, 2003 in Book 7318 at Page 617 as Doc. No. 14170.

Subject to a Development Agreement recorded in Book 6525 at Page 538 as Doc. No. 5656 on February 28, 2000.

Subject to a Development Agreement recorded in Book 7010 at Page 1092 as Doc. No. 13807 on April 9, 2002.

Subject to a Service and Driveway Easement over a portion of the herein described Block GP04 identified as Parcel DE-3 in favour of Samir Chater, Marie Chater, Wissam Haidar and Sal L. Haidar their successors and assigns by virtue of Indentures recorded at the Registry of Deeds for the County of Halifax in Book 7023, Page 949 and Book 7023, Page 959; Parcel DE-3 as shown on the above referred to Plan No. 13-1531-0 and being more particularly described as follows:

Beginning on the curved southwestern boundary of Greenpark Close at the northern corner of Block GP04;

Thence southeasterly on a curve to the left which has a radius of 54.13 feet for a distance of 41.36 feet along the curved northwestern boundary of Block GP04;

Thence south 51 degrees 22 minutes 04 seconds west, 114.84 feet to the curved northwestern boundary of Block GP04;

Thence northeasterly on a curve to the right which has a radius of 687.00 feet for a distance of 128.48 feet along the curved northwestern boundary of Block GP04 to the place of beginning.

Containing 2,432 square feet

Subject also to an easement over a portion of the herein described Block GP04 in favour of Nova Scotia Power Incorporated (Nova Scotia Power Corporation) by virtue of and Indenture recorded at the Registry of Deeds for the County of Halifax in Book 4631, Page 567; said easement being more particularly described as follows:

Beginning on the northeastern boundary of lands conveyed to Halifax Regional Water Commission (Public Service Commission) at the western corner of Block GP04;

Thence north 57 degrees 59 minutes 05 seconds east, 70.98 feet along the northwestern boundary of Block GP04 to a point thereon;

Thence southeasterly on a curve to the left which has a radius of 5,536.66 feet for a distance of 601.54 feet;

Thence south 23 degrees 19 minutes 32 seconds west, 105.37 feet to the curved southwestern boundary of Block GP04;

Thence northwesterly on a curve to the right which has a radius of 5,629.66 feet for a distance of 102.46 feet along said curved southwestern boundary of Block GP04;

Thence north 32 degrees 44 minutes 14 seconds west, 558.43 feet along the southwestern boundary of Block GP04 to the place of beginning.

Containing 50,012 square feet.

Compliance with MGA: The parcel originates with a plan of subdivision that has been filed under the Registry Act or registered under the Land Registration Act at the Land Registration Office for the registration district of Halifax as Plan 35602 Drawer No. 390.



**PID 41177379 "Halifax Water Lands"**

ALL that certain lot piece or parcel of land situate lying and being at Geizer's Hill near Dutch Village, in the County of Halifax, and more particularly described as follows:

BEGINNING at a stake and stones on the division line between lands of Henry Deal and lands of Edward Clayton and William J. Clayton, formerly known as the Isles lot, and at a distance of 40 chains measured on a course of south 9 degrees East (Magnetic 1923) from an old stake and stones marking the northwest angle of the Deal lot and the northeast angle of the Clayton lot;

THENCE to run South 9 degrees East (Magnetic 1923), along the said division line 20 chains to the northern side of a road (known as the Geizer's Hill Road);

THENCE South 81 degrees West (Magnetic 1923), 9 chains and 66 links to a stake and stones;

THENCE North 9 degrees West (Magnetic 1923) 20 chains to a stake and stones;

THENCE North 81 degrees East (Magnetic 1923) 9 chains and 66 links to place of beginning;

CONTAINING 20 acres more or less and being part of the lands conveyed to said Edward and Wm. J. Clayton by Stanley A. Deal and wife by deed recorded at Halifax, Registry of Deeds in Book 418 page 401;

SUBJECT TO a right-of-way or passage for the said Edward and Wm. J. Clayton their heirs and assigns and servants agents and workmen to pass and repass by day and by night on foot and by vehicle in, over and upon a strip of piece of land being part of the above lands and premises more particularly described as follows:

COMMENCING at the southwest corner of the above described lands and premises on the northern side of a road (known as Geizer Hill Road);

THENCE northerly along the western side line of the above described lands and premises 20 chains or to the northwest corner of said lands and premises;

THENCE easterly along the northern side line of said lands and premises a distance of 12 feet;

THENCE southerly in a line parallel with the said western side line of the above described lands and premises 20 chains or to the northern side of a road (known as Geizer Hill Road);

THENCE westerly along south side line of above described lands and premises 12 feet to place of beginning, being same lands as conveyed and contained in a Deed dated 10th February 1956, recorded at Halifax, in Book 1377 page 593.

SUBJECT TO an easement as defined and described in the Grant of Easement recorded on March 13, 1961, in Book 1724 at Page 646.

The parcel was created by a subdivision that predates subdivision control or planning legislation or by-laws in the municipality and therefore no subdivision approval was required for creation of this parcel.

**PID 41177387 "Halifax Water Lands"**

ALL that certain piece or parcel of land situate, lying and being at Geizer Hill, near Dutch Village, in the County of Halifax, and being a portion of the western half of the Dutch Village Lot No. 8, Letter "B", and which said land may be more particularly described as follows, that is to say:

BEGINNING at a stake and stones, on the division line between lands formerly owned by one Henry Deal, and property formerly owned by one Clayton, formerly known as the Isles Lot, and at a distance of 40 chains, measured on a course South, 9 degrees East (Magnetic 1923) from an old stake and stones marking the North-West angle of the Deal lot, and the North-East angle of the Clayton lot;

THENCE to run South, 9 degrees East (Magnetic 1923) along the said division line, 20 chains to the Northern side of a road known as the Geizer Hill Road;

THENCE North, 81 degrees East (Magnetic 1923) along the Northern side of the said road, 10 chains to a stake and stones;

THENCE North, 9 degrees West (Magnetic 1923) 20 chains to a stake and stones;

THENCE South, 81 degrees West (Magnetic 1923) 10 chains to the place of beginning (containing 20 acres more or less and being part of the lands and premises conveyed to the aforementioned Henry Deal by deed dated May 28th, 1895 and recorded in the Registry of Deeds at Halifax in Book 307 at page 577).

SUBJECT TO A RIGHT OF WAY for the use of the said Henry Deal, his heirs and assigns, and his agents, servants and workmen, a right-of-way or passage to pass and repass by night and by day on foot or by vehicle, in, over and upon that certain strip or parcel of land being part of the above described lands and premises:

COMMENCING at the South-East corner of the above described lands and premises, on the Northern side of a road known as the Geizer Hill Road;

THENCE Northerly along the Eastern side line of the said lands and premises, 20 chains or to the North-east corner thereof;

THENCE Westerly along the Northern side line of the said lands and premises, 12 feet;

THENCE Southerly in a line parallel with the Eastern side line of the said lands and premises 20 chains to the Northern side of the said road;

THENCE Easterly along the Northern side of the said road, being the Southern side line of the said lands and premises, 12 feet, or to the place of beginning.

The road referred to in the above description as "the Geizer Hill Road" is intended to be the road shown on a plan filed in the Registry of Deeds office under Expropriation file #564 and designated on the plan as "Location of road allowance in old grants", and is not the existing Geizer Hill Road as it is located on the ground;

The above described lands and premises are intended to be the same lands and premises as conveyed to James S. Coughlan by News Traffic Board Limited by deed dated the 31st day of December, A.D. 1940, recorded in the Registry of Deeds office at Halifax in Book 927, page 241.

SUBJECT TO the easements as defined and described in the Grant of Easement recorded March 13, 1961, in Book 1724 at Page 646.

The parcel was created by a subdivision that predates subdivision control or planning legislation or by-laws in the municipality and therefore no subdivision approval was required for creation of this parcel.

**PID 41177403 "Halifax Water Lands"**

All that lot, piece or parcel of land situate, lying and being near Chain Lakes in the County of Halifax, being the northern portion of Lot 2 of the lots in the rear of the Dutch Village lots, the said lot being bounded and described as follows:

Beginning at a point on the north boundary line of Lot No. 10 of the Dutch Village Lots, distant 625 feet, more or less, easterly from a granite boundary stone marked H. W. No. 16;

Thence North, 12, West for a distance of 60 chains, more or less, to the Geizer Road (so called);

Thence South, 78, West, for a distance of 20 chains, more or less, by the south side of said road;

Thence South, 12, East, for a distance of 60 chains, more or less, to the North boundary line of Lot No. 10;

Thence North, 78, East, along the said Northern boundary line of Lot No. 10 to the place of beginning;

The said lot being colored Yellow on a plan entitled Plan showing land near Chain Lakes to be acquired by the City of Halifax, dated February 6, 1894, signed by F.W. Doane, City Engineer, and on file in the City Engineers Office at Halifax.

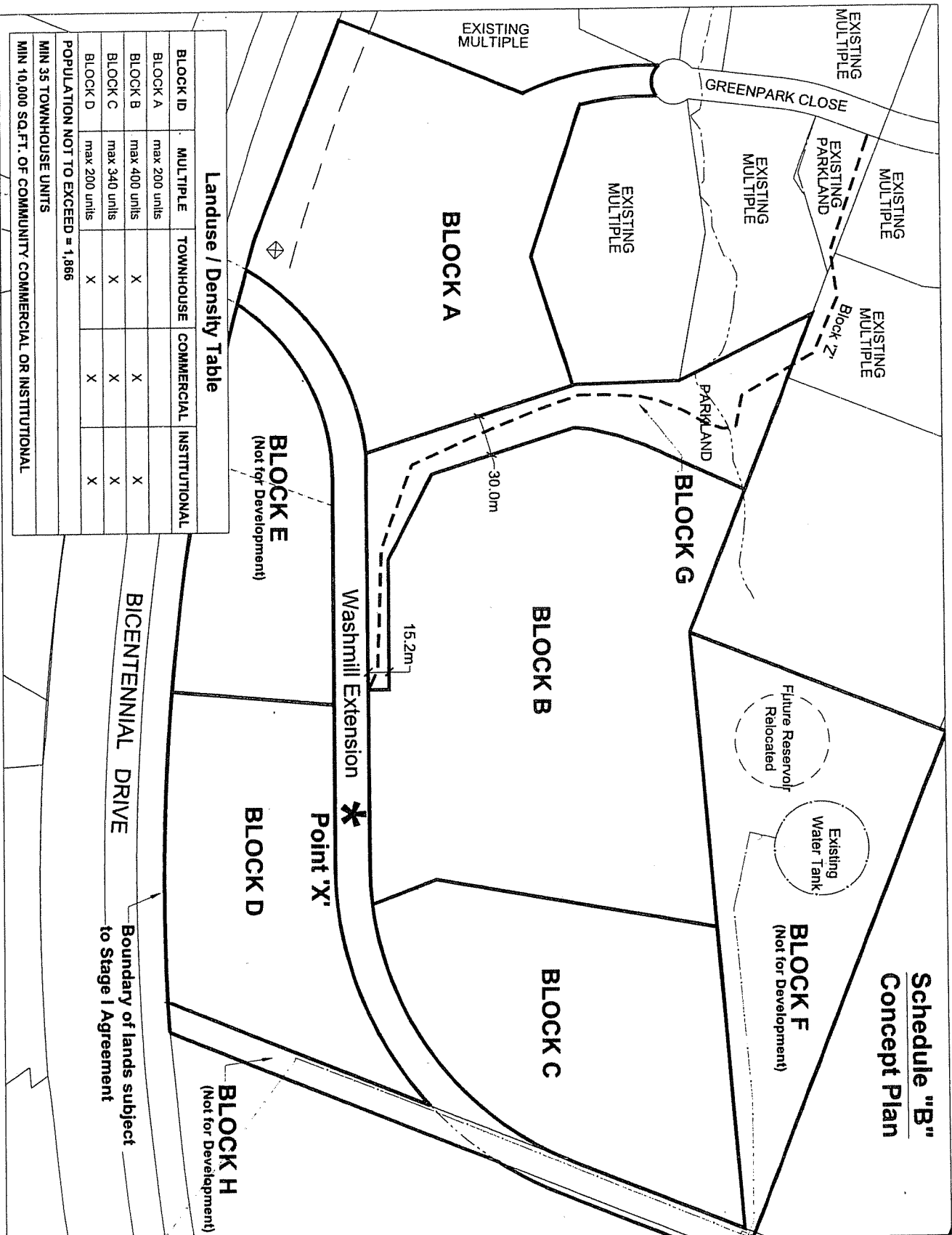
Excepting therefrom all that portion of the Bicentennial Highway (Highway 102) as expropriated by Expropriation No. 1697.

Also Excepting therefrom, all that portion of the above described Lot 2 which lies to the south of the Bicentennial Highway, having been severed from the northern portion of the said Lot 2 by Expropriation No. 1697.

Also saving and excepting Parcel 26A as shown on Land Registration Plan #84876813.

The parcel is exempt from the requirement for subdivision approval under the Municipal Government Act because it was created by the expropriation for the Bicentennial Highway, which severed the original parcel.

# **Schedule "B"** **Concept Plan**



**Schedule C:**  
**Architectural and Site Planning Guidelines**

**Part 1: Height, Facades and Articulation**

- 1.1 The maximum height of any building shall not exceed 12 storeys above average grade, not including mechanical penthouses or enclosed amenity space.
- 1.2 The main facade should be oriented to the street or to the driveway, if the driveway functions as a street.
- 1.3 Street facing facades should have the highest design quality; however, all publicly viewed facades should have a consistent and high quality design expression.
- 1.4 To ensure breaks in the facade, buildings over 4 storeys should, where possible, be designed to have a lower and an upper portion through the use of setbacks, extrusions, textures, materials, detailing, etc.:
- (a) Lower Portion: Within the first two to four storeys (depending on the overall height of the building), a base should be clearly defined and positively contribute to the quality of the development through transparency, articulation and material quality.
  - (b) Upper Portion: The upper portion of the building should be distinguished from the lower portion, and should contribute to the physical and visual quality of the overall community.
- 1.5 Large blank or unadorned walls are not permitted.
- 1.6 For commercial or institutional buildings, all publicly viewed facades over a certain length (approximately 15 metres) in length shall have the appearance of two or more buildings by altering the appearance of the facade and/or roof, in increments of a reasonable length (approximately 15 metres).

**Part 2: Entrances, Doors and Windows**

- 2.1 At least one main entrance should be oriented to the street or to the driveway, if the driveway functions as a street.
- 2.2 All main entrances to the building should be emphasized by detailing, changes in materials, and other architectural devices. Such details may include a change in height, roofline or massing, projection of the entrance, or the use of architectural devices such as lintels, columns, porticos, overhangs, cornerboards, or fascia boards.
- 2.3 All main entrances to the building should be covered with a canopy, awning, recess or similar device to provide pedestrian weather protection.

- 2.4 Service or delivery entrances should be integrated into the design of the building and should not be a predominate feature.
- 2.5 Doors should be selected to complement the architectural design of the building and to satisfy functional and climatic issues.
- 2.6 Windows should be selected to complement the architectural design of the building and to satisfy functional and climatic issues. Window placement, size and proportion should be consistent with the architectural design of the building.
- 2.7 All publicly viewed facades shall have windows.

### **Part 3: Roofs**

- 3.1 The roof should be designed to include architectural elements that provide visual interest. The street-side design treatment of a parapet should be carried over to the back side of the parapet for a complete, finished look where they will be visible from other buildings and other high vantage points.
- 3.2 All rooftop mechanical equipment shall be screened from view by integrating it into the architectural design of the building. Mechanical penthouses and elevator and stairway head-houses should be incorporated into a single well-designed roof top structure.
- 3.3 The roof pitch should be consistent with the building architectural style.
- 3.4 Flat roofs or roofs with less than 5-in-12 pitch shall be given special consideration with regard to the integration of the roof with the building architecture.
- 3.5 Where exposed roof surface areas are large, design elements should be incorporated to break down perceived proportion, scale and massing of the roof to create human-scaled surfaces. Such design elements could include dormers, gables, cross gables, varying planes or other elements.

### **Part 4: Materials**

- 4.1 Building materials should be chosen for their functional and aesthetic quality, and exterior finishes should exhibit quality of workmanship, sustainability and ease of maintenance.
- 4.2 Permitted materials include, but are not limited to, natural stone, brick, manufactured stone (masonry application), split-faced concrete block masonry, cement based stucco system, EIFS/acrylic stucco system, prefinished metal, aluminum shingles, wood shingles, wood siding, glass, the limited use of vinyl siding, or the limited use of cement-board siding.
- 4.3 The scale of the material should be consistent with the scale of the building.

4.4 A minimum of two major exterior cladding materials, excluding fenestration, are required for any publicly viewed facade. The proportions of each material should be sensitively designed.

- (a) In the case of most materials, except for vinyl siding or cement board siding, the use of two discernable colours, two discernable textures, or combinations thereof of the same material are acceptable as meeting the requirements.
- (b) In the case of vinyl siding or cement board siding, consideration will be given to two different material patterns in a case where a relatively smaller proportion (greater than 25% of each facade) of a third material is used. For example, it would be acceptable if publicly viewed facades were proposed to contain 3 materials: 25% stone and 75% vinyl siding of two colours or patterns.

4.5 Materials used for the main facade should be carried around the building where other facades are publicly viewed. Changes in material should not occur at building corners.

4.6 For multiple unit dwellings, commercial or institutional uses, unpainted or unstained wood (including pressure treated wood) shall not be used as a building material for permanent decks, balconies, railings and other similar architectural embellishments.

4.7 Any exposed foundation in excess of 0.61 metres (2 feet) in height and 1.86 square metres (20 square feet) in total area shall be architecturally detailed, veneered, or mitigated with suitable landscaping.

4.8 All vents, down spouts, flashing, electrical conduits, metres, service connections, and other functional elements should be treated as integral parts of the design. Where appropriate these elements should be painted to match the colour of the adjacent surface, except where used expressly as an accent.

4.9 For commercial or institutional uses, accessory buildings should be treated similar to the principal buildings on the same site.

## **Part 5: Parking and Circulation**

5.1 Where surface parking is provided for multiple unit dwellings, commercial or institutional uses:

- (a) Surface parking lots should, where possible, be located out of the public view.
- (b) Surface parking should be broken up into moderately sized lots, of between approximately 40 to 60 parking spaces.
- (c) Surface parking lots shall be designed to include internal landscaping or hardscaping on islands at the ends of each parking aisle, clearly marked pedestrian access and paths, pedestrian-oriented lighting, and be concealed with low maintenance landscaped buffers or other mitigating design measures.
- (d) Surface parking should be designed according to the principles of CPTED (Community Protection Through Environmental Design).

5.2 Where service, storage, utility or loading areas are required for multiple unit dwellings, commercial or institutional uses, they should be screened from the public view and

nearby residential uses. If these areas must be in the public view, they shall include high quality materials and features that can include continuous paving treatments, landscaping and well designed doors and entries.

## **Part 6: Townhouses**

In addition to the previous Sections of these Architectural Guidelines, the following also applies to townhouses.

- 6.1 Architectural detailing including, but not limited to, lintels, pediments, pilasters, columns, porticos, overhangs, cornerboards, frieze, fascia boards, shall be incorporated.
- 6.2 Architectural treatment shall be continued around the sides of the building.
- 6.3 Vinyl siding may be utilized to a maximum of forty percent (40%) on front elevations. Vinyl siding may be permitted along the side and rear of the units.
- 6.4 Propane tanks and electrical transformers and all other exterior utility boxes shall be located and secured in accordance with the applicable approval agencies. These facilities shall be screened by means of opaque fencing, structural walls or suitable landscaping if located in side yard.
- 6.5 Electrical power, telephone, cable and similar utilities shall be brought by underground conduit to the building.
- 6.6 Any exposed lumber on the front facade of any townhouse shall be painted, stained or clad in metal or vinyl.
- 6.7 Any exposed foundation in excess of 1 metre (3.28 feet) in height shall be architecturally detailed, veneered with stone or brick, painted, stucco, or an equivalent.
- 6.8 Buildings should be oriented with the main entrance facing a public street where possible.
- 6.9 Blank endwalls shall be avoided by means such as, but not limited to, the location of the front door on the side wall of corner units, windows, or architectural detailing.
- 6.10 Private exterior space, such as porches, balconies, patios or roof terraces, should be provided for each individual unit.



**Schedule "D"**  
**GP04 Conceptual**  
**Subdivision Plan**

Greenpark Close

EXISTING  
MULTIPLE

EXISTING  
MULTIPLE

PROPOSED  
PROPERTY LINE

**GP04-A**

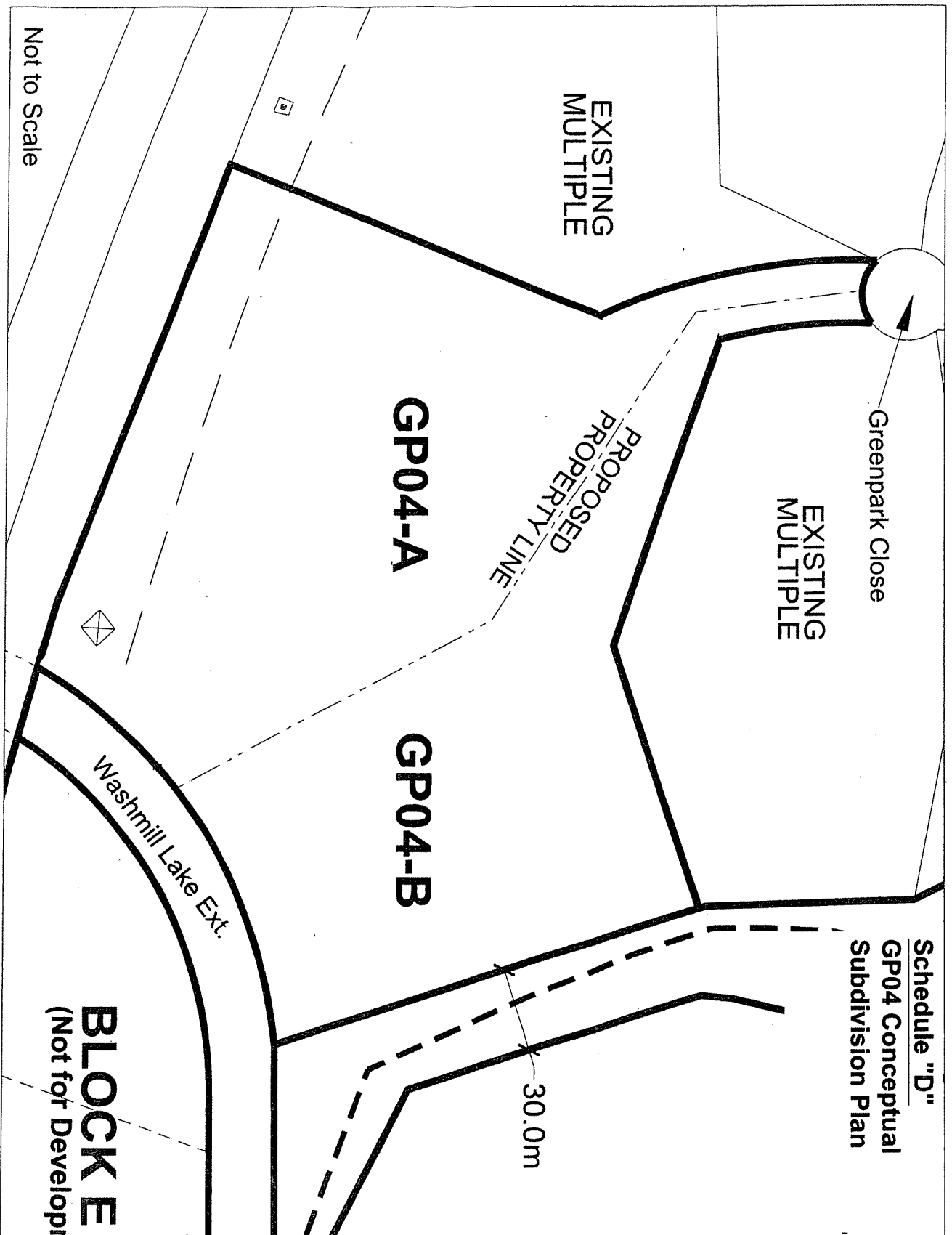
**GP04-B**

30.0m

Washmill Lake Ext.

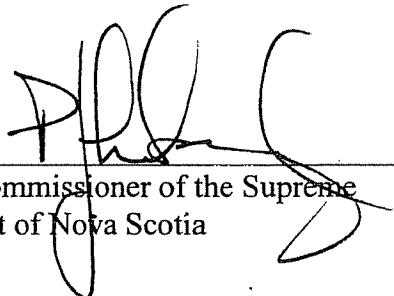
**BLOCK E**  
(Not for Development)

Not to Scale



PROVINCE OF NOVA SCOTIA  
COUNTY OF HALIFAX, NOVA SCOTIA

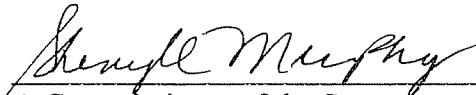
ON THIS 15<sup>th</sup> day of FEB, A.D., 2010, before me, the subscriber personally came and appeared K. HARTON a subscribing witness to the within and foregoing Indenture, who, having been by me duly sworn, made oath and said that **CLAYTON DEVELOPMENTS LIMITED**, and **SHAW GROUP LIMITED**, one of the parties thereto, signed, sealed and delivered the same in ~~his~~ <sup>her</sup> presence.

  
A Commissioner of the Supreme  
Court of Nova Scotia

PETER J. E. McDONOUGH

PROVINCE OF NOVA SCOTIA  
COUNTY OF HALIFAX, NOVA SCOTIA

ON THIS 9<sup>th</sup> day of March, A.D., 2010, before me, the subscriber personally came and appeared before me Kelly MacNamara & Sena Gbek the subscribing witness to the within and the foregoing Indenture, who, having been by me duly sworn, made oath and said that the Halifax Regional Municipality, one of the parties thereto, caused the same to be executed and its Corporate Seal to be thereunto affixed by the hands of Peter Kelly, its Mayor, and Cathy Mellet, its Acting Municipal Clerk, its duly authorized officers in his presence.

  
A Commissioner of the Supreme  
Court of Nova Scotia

SHERRYLL MURPHY  
A Commissioner of the  
Supreme Court of Nova Scotia

**CLAYTON DEVELOPMENTS LIMITED, and  
SHAW GROUP LIMITED**

a body corporate in the  
County of Halifax,  
Province of Nova Scotia,  
(hereinafter called the "Developer")

OF THE FIRST PART

- and -

**HALIFAX REGIONAL MUNICIPALITY**

A municipal body corporate,  
(hereinafter called the  
"Halifax Regional Municipality")

OF THE SECOND PART

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DEVELOPMENT AGREEMENT

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**-OVERVIEW-**

**SLATE MANAGEMENT  
FOR DEVELOPMENT OF THE PANORAMA,  
BLOCK B, CLAYTON PARK WEST PHASE 5,  
HALIFAX, NOVA SCOTIA**

Prepared for

Mr. Peter Giannoulis  
90 Camelot Lane  
Halifax, NS  
B3M 4H9

And

Clayton Developments Limited  
255 Lacewood Drive, Unit 100C  
Halifax, NS  
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By

Maritime Testing (1985) Limited  
97 Troop Ave  
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B3B 2A7

April 5, 2011

MTL PROJECT NO. 12430

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	I
1.0 INTRODUCTION.....	1
2.0 EXISTING SITE CONDITIONS.....	1
3.0 DISTURBANCE OF SLATE BEDROCK.....	1
4.0 RE-USE OF SLATE ROCKFILL.....	2
4.1 GENERAL .....	3
4.2 BUILDING SITES.....	3
4.3 PARKING LOTS .....	4
4.4 OTHER DEVELOPMENT FEATURES .....	4
4.5 UNDERGROUND SERVICE LATERALS .....	5
5.0 MONITORING PLAN.....	5
6.0 CONCLUSION .....	6

## EXECUTIVE SUMMARY

Development of The Panorama at “Block B”, adjacent to the extension of Washmill Lake Court, will require excavation into the sulphide bearing bedrock to achieve design grades. This activity will be subject to Nova Scotia Environment’s *Sulphide Bearing Material Disposal Regulations*.

Off-site disposal of all disturbed rockfill at the licensed marine infill sites may not be economically feasible and therefore, managed re-use of slate rockfill on the site is being proposed. Based on our experience on similar development projects in Halifax, this report provides an overview of how this activity will be managed. Detailed application to NSE for Approval of the re-use, including the location and capacity of the various cells, is being prepared as design grades are being finalized.

In summary, at multi-unit building sites, the buildings will provide surface cover over slate rockfill. In select areas of parking, a special low-permeable asphalt surface will be used in conjunction with a low permeable clay cap constructed beneath the pavement structure gravels as a secondary means of encapsulation. Service trenches will be backfilled with imported (non-sulphide bearing) fill and not located within encapsulation zones.

As the individual building sites and parking lots are completed, the majority of the land area where bedrock disturbance has occurred becomes hard surfaced with asphalt and the buildings. Surface water will be prevented from infiltrating into the former bedrock excavations, as the hard surfaces and grading will direct it into the storm sewers or offsite as sheet flow. Drainage layers constructed of imported rockfill at the base of the encapsulations would allow groundwater to move through the sites without ponding in the encapsulation cells.

Monitoring will be conducted to ensure no worsening of surface water quality from background conditions. Surface water treatment such as with limestone will be conducted if necessary, based on the monitoring results.

## **1.0 INTRODUCTION**

On behalf of Mr. Peter Giannoulis and Clayton Developments Limited, Maritime Testing (1985) Limited (Maritime) has reviewed the site development plans for “Block B” located in Clayton Park West Phase 5 as they relate to the excavation of sulphide bearing rock. The project is to be located along the Washmill Court extension, north of Highway 102, in the Geizer Hill area of the Halifax Regional Municipality.

We understand that development of “Block B” will include five residential and commercial complexes with associated access roadways, parking areas and underground primary services. The intent of this report is to outline how potential environmental impacts from earthworks activities that will disturb sulphide bearing slate bedrock will be mitigated. We also provide guidelines for re-use of sulphide bearing material as structural fill in select areas.

## **2.0 EXISTING SITE CONDITIONS**

Maritime Testing is familiar with the geology of the area from work on adjacent properties including the existing extension of Washmill Court. The development site is generally at a topographical high relative to most adjacent properties. The ground surface is moderately steep and rolling, and bedrock controlled, with a combination of exposed bedrock outcrops and thin soil veneer over bedrock in most areas. The bedrock in this area is of the Meguma Supergroup of meta-sediments. Specifically, the site is underlain by bedrock of the Cunard Formation of the Halifax Group. This unit is described as black slate and metasiltstone. The Cunard Formation slates are typically sulphide bearing and, as such, any disturbance of the bedrock must be in accordance with the *Sulphide Bearing Material Disposal Regulations*.

## **3.0 DISTURBANCE OF SLATE BEDROCK**

### Regulations

The development of the building sites and installation of underground services will require excavation into the sulphide bearing bedrock to achieve design grades. This activity will be subject to the *Sulphide Bearing Material Disposal Regulations* pursuant to the Nova Scotia Environment Act. Section 9 of the *Regulations* outline the excavation requirements, which include (we summarize):

- limiting overburden removal and bedrock disturbance to satisfy the construction requirement,
- diverting run-off away from the bedrock exposure,
- removing and disposing of the excavated bedrock immediately in accordance with the regulations,
- minimizing bedrock exposure time,
- diverting run-off to a centralized point on the property where it can be monitored if required by NSE, and
- no storage of the sulphide bearing material without written approval from NSE.

#### Anticipated Disturbance

Based on the proposed design grades and existing topographic mapping, Servant, Dunbrack, Mckenzie and MacDonald Ltd. has estimated that approximately 25,960 yd<sup>3</sup> of slate bedrock would be disturbed during construction of the proposed buildings. Slate bedrock would also be disturbed during construction of primary services (i.e. water main and sanitary and storm sewers) and the proposed parking lots. Disturbance volume will be available as the grades are being finalized.

#### **4.0 RE-USE OF SLATE ROCKFILL**

Design grades of the various buildings being proposed for development are currently being fine-tuned to minimize the quantity of bedrock disturbance. Complete avoidance of bedrock disturbance will not be possible, yet off-site disposal of all disturbed rockfill at the licensed marine infill sites may not be economically feasible. Based on our experience on similar development projects in Halifax, we provide the following overview of how the managed re-use of sulphide bearing rockfill will be achieved.

Note that all of the excavation requirements summarized in Section 3.0 above must be met regardless of whether disturbed bedrock is maintained on the property or removed from the site. These principals will be incorporated into the erosion and sedimentation control plan for the site. In addition to these requirements, application will be made to Nova Scotia Environment for approval to re-use specific volumes of sulphide bearing material in specific locations. If granted, the Approval would stipulate the terms and conditions of the re-use. Maritime has been liaising with NSE about the requirements and is currently working on the detailed application, as the grades are being finalized.



#### **4.1 General**

Servant, Dunbrack, Mckenzie and MacDonald Ltd. has prepared *Limits of Disturbance* and *Erosion and Sedimentation Control* Schematics. In keeping with these plans and the principles outlined in the *Sulphide Bearing Material Disposal Regulations*, the removal of vegetation and overburden soils shall be limited to satisfy the construction requirement. To this end, the development of the building sites will be staged. Surface run-off will be directed away from the sulphide bearing material disturbance sites where possible.

#### **4.2 Building Sites**

Based on our geotechnical work in the area, we expect only a very thin soil cover over bedrock. Outcrops are visible in some areas. Once the building sites are prepared by removing the grubbing layer and exposing the bedrock surface, the bedrock topography will be surveyed. The natural drainage routes will be identified and documented for future water monitoring purposes.

Most of the building sites will require a combination of cut and fill to achieve the design grades. In areas that require site grades to be raised for foundation construction, a 300mm layer of imported quarried rockfill would be placed as a drainage layer. This will allow any groundwater that migrates beneath the buildings to flow through the 300mm of imported rockfill along the top of the bedrock, beneath rather than within the Slate aggregate. Based on site topography, any groundwater migrating from the fill areas is expected to surface at select locations along the perimeter of the development site, where it can be monitored.

Following placement of the drainage layer, the excavated Slate bedrock will be placed as engineered fill. Eventually, the cast-in-place concrete foundations will be constructed followed immediately by cast-in-place concrete walls, and placement of subfloor granular materials and vapour barrier. Once sufficient curing of the concrete foundations and walls has occurred, the cast-in-place concrete floor will be constructed. If greater than 30 days elapses between the placement of the Slate rockfill and construction of the concrete walls and floor, a temporary cover such as imported clay will be placed over the building pad.

All areas of the building lots that are not occupied by the apartment buildings will be landscaped and asphalt covered to divert up-gradient surface water around, rather than through, the building lots and to reduce infiltration of surface water into the subsurface. Upon completion of development of all the building sites, the re-used Slate bedrock will be encapsulated by the concrete foundations and will be above the elevation of any potential groundwater migration. The identified drainage pathways from the encapsulation cells will be monitored for any changes in water quality.

### 4.3 Parking Lots

The following measures will be taken where encapsulation of sulphide bearing rock is proposed for beneath paved parking areas. The site rockfill would be isolated from water exposure with surface capping measures, control of surface water, and subsurface drainage measures. Generally, a quarried rock drainage layer would be provided at the bottom of the encapsulation area with positive grading to an outlet to prevent groundwater build up and maintain a drained condition. The sulphide bearing site rockfill would be placed and compacted above the drainage layer. The identified drainage pathways from the encapsulation cells will be monitored for any changes in water quality. A protective cap of low permeable imported “clay” soil would be constructed above the rockfill and extend beyond the limits sufficiently to prevent water infiltration through the sulphide bearing rockfill. To achieve this, we recommend constructing a 300 mm thick layer of clay liner with a maximum permeability of  $2.5 \times 10^{-7}$  cm/s. This would provide the equivalent protection of a 1.2 m thick layer of low permeable soil with a permeability of  $1 \times 10^{-6}$  cm/s, exceeding the requirement of the *Sulphide Bearing Materials Disposal Regulations*. Laboratory prequalification testing and confirmatory as-constructed testing of the liner would be conducted to confirm permeability characteristics.

Pavement structure gravels would be placed and compacted above the clay cap. A low permeable pavement would be constructed at the top of the encapsulation area to direct surface water to stormwater infrastructure. Details are as follows.

We recommend utilizing 75 mm thickness of a dense graded asphalt concrete mixture with a more closed gradation characteristic (i.e. lower permeability). A HRM Special C Mix compacted to a minimum of 92.5 percent of the material’s theoretical maximum density is recommended for use. It has a low design air voids relative to conventional mixes and results in a higher bitumen content. Laboratory triaxial permeability testing performed on a prepared sample of the mixture indicates a permeability of  $1 \times 10^{-8}$  cm/s. For construction purposes, we recommend a maximum in-place permeability of  $5 \times 10^{-8}$  cm/s. During construction we recommend that all joints with structures (e.g. manholes, catchbasins, concrete curbs, etc.) be treated with a tack compound to promote a good bond with the asphalt and create low permeability characteristics at these joints.

### 4.4 Other Development Features

For the northeast portion of the site, development of a recreational opportunity, such as mini golf, is being explored and this area, too, may have potential for slate rockfill placement. If so, its detailed design will be incorporated into the application to NSE.

#### 4.5 Underground Service Laterals

Installation of underground services for this project will require excavation into sulphide bearing bedrock to achieve design grades. Loose rock, once broken or blasted from the service trench, shall not be stockpiled on-site for longer than 30 days. The excavated rock shall be transported off-site for appropriate disposal at one of the two local, licensed marine disposal sites, or placed in an on-site encapsulation cell that is approved by NSE. Only imported (non-sulphide bearing) materials should be used to backfill service laterals.

### 5.0 MONITORING PLAN

#### Regulations

The development of the building sites and installation of underground services will require excavation into the sulphide bearing bedrock to achieve design grades. This activity will be subject to the *Sulphide Bearing Material Disposal Regulations*. Section 11 of the *Regulations* outline your disposal site operational requirements with respect to surface water monitoring (paraphrased):

- a) effluent or run-off from a disposal site must be directed to a centralized collection point and monitored for pH, aluminum, conductivity and other items detailed in the approval;
- b) effluent from the centralized collection point must meet the following criteria:
  - i)  $\text{pH} \geq 4.0$
  - ii)  $\text{aluminum} \leq 0.8 \text{ mg/l}$
  - iii)  $\text{conductivity} \leq 500 \text{ micromhos/cm}$

In addition, Halifax Water has a stormwater by-law that stipulates a pH of not less than 6.0.

#### Monitoring Plan

From water monitoring in the area we understand that baseline stormwater pH generally does not satisfy HRM's stormwater quality guideline range of 6.0 to 9.5. The pH of stormwater in the area was lower than the acceptable range prior to commencement of the Washmill Court Extension project. Background water quality testing is being undertaken at each building site to establish background water quality. Construction phase water quality monitoring will be conducted to ensure no worsening of the water quality.

Based on proposed storm water management plan and topographic survey plan of the site, we understand that majority of the site (Areas A, D and E) will drain towards Washmill Court Extension travelling through two wetlands on site into the storm sewer system through four possible points of entrance. The remainder northwestern portion of the site (Areas B and C) will drain into the parkland as overflow to the northwest. Three limestone filled dispersion trenches will be incorporated on site to control surface drainage flows during construction and post-construction phase.

Maritime has identified several monitoring stations within proximity of the building sites. Monitoring stations will include two wetlands at their discharge points into the storm sewer system on Washmill Court Extension and on the access road to The Panorama, and areas directly downgradient of the dispersion trenches along the western side of the site. Additional monitoring stations may be located along Washmill Lake Court Extension once drainage routes from the slate fill cells are groundtruthed.

Water samples will be collected during precipitation events during construction and tested for field parameters (temperature, pH and conductivity). Additional monitoring requirements (such as lab analysis for aluminum) are being discussed with NSE and will be outlined in the terms and conditions of the approval to re-use the slate.

The purpose of the monitoring program will be to ensure no worsening of water quality below background conditions and no pH readings of less than 4.0. If there is any evidence of acid generation from the project based on the water quality findings, the developer would treat surface water, such as with limestone addition.

## **6.0 CONCLUSION**

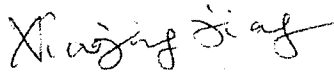
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It is our opinion that with careful planning, construction methodology, monitoring and diligence, the environmental risks of building site development in the Geizer Hill area can be managed.

We trust that this meets with the application requirements. Please feel free to contact the undersigned if you have any questions.

Sincerely Yours,  
Maritime Testing (1985) Limited



Xiaojing Jiang, MES., P.Eng.  
Environmental Engineer



Doreen Chenard, B.Sc. in Agr  
Manager, Environmental Assessments