

P.O. Box 1749 Halifax, Nova Scotia B3J 3A5 Canada

Marine Drive, Valley and Canal Community Council

TO:	Members of Marine Drive, Valley and Canal Community Council		
SUBMITTED BY:	ORIGINAL SIGNED BY VICE CHAIR		
	Mr. Walter Regan, Vice-Chair, Halifax Watershed Advisory Board		
DATE:	June 20, 2011		
SUBJECT:	Case 15969: Development Agreement for an Open Space Subdivision at 156 Windgate Drive, Windsor Junction		

<u>ORIGIN</u>

Halifax Watershed Advisory Board June 15, 2011 meeting.

RECOMMENDATION

The Halifax Watershed Advisory Board recommends to Marine Drive, Valley and Community Council that:

- 1. The condominium design should consider capturing LEED credits for reduction of water consumption.
- 2. Soil testing be done for contamination at the barn/manure pile site and at sites proposed for the infiltration ditches.
- 3. Baseline testing of the water be conducted at designated locations in Second Lake.
- 4. HRM staff review the Condominium Corporation's by-laws for compliance with water protection.
- 5. A non-disturbance area be included in the Development Agreement.
- 6. A sedimentation and erosion plan be established.
- 7. A minimum mandatory bonding of \$10,000 per acre be required.
- 8. Oil not be used for home heating (impact on lake if oil spill).
- 9. Testing be conducted to rule out the presence of acidic slate.
- 10. The common area next to the lake be landscaped and reforestation efforts continued.

BACKGROUND

The Halifax Watershed Advisory Board discussed this matter during its June 15, 2011 meeting.

Further information can be reviewed within the staff memorandum dated June 6, 2011.

DISCUSSION

The Board discussed the following points during its June 15th meeting:

- the sandy/silt soil composition
- the proposed source of heating for the condos
- drainage and infiltration through the trenches
- monitoring of household water use
- whether horses will remain on the site and how this will be managed
- bonding and securities
- the role of the Condominium Corporation

BUDGET IMPLICATIONS

There are no budget implications. The Developer will be responsible for all costs, expenses, liabilities, and obligations imposed under or incurred in order to satisfy the terms of this Agreement. The administration of this Agreement can be carried out within the proposed budget with existing resources.

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 June 6, 2011

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.



PO Box 1749 Halifax, Nova Scotia B3J 3A5 Canada

MEMORANDUM

TO: Chair and Members of Halifax Watershed Advisory Board

FROM: Tyson Simms, Planner

DATE: June 6, 2011

SUBJECT: Case 15969: Development Agreement for an Open Space Subdivision at 156 Windgate Drive, Windsor Junction.

				Developments					
				t an open space s					
identified as	PID	#005106	28 and	1 #40280810 (15	66 Windga	ate I	Inve, V	Ninds	or
Junction).									

Location: The subject properties are located at 156 Windgate Drive, Windsor Junction (Map 1)

- Zoning: R-6 Rural Residential Sackville Land Use By-law (Map 1)
- Designation:RC Rural Commuter Regional Municipal Planning Strategy
RR Rural Residential Sackville Municipal Planning Strategy (Map 2)
- Adjacent Land Use: Residential abutting the property to the west. Southern and eastern property boundaries abut Second Lake. The northern property boundary abuts lands owned by Canadian Government Railways. The railway is active and currently administered by the Windsor & Hantsport Railway Company.

Site Features

Land Use – The subject property (PID #0050628) is home to an existing horse farm known as Windgate Farm. The horse riding farm has been in existence for more than 40 years. The second property (PID #40280810) is currently developed with a residence. Combined, the properties contain a total area of approximately 14.2 acres. Due to the presence of the railway to the north, the subject properties have no frontage along Windgate Drive.

<u>Environmental</u> – Southern and eastern portions of the property are bordered by a watercourse identified as Second Lake on the attached concept plan (Attachment A). The lake shoreline measures 4.8 kilometers and includes two peninsulas and a number of quiet coves. The lake is very clean and was once the water supply for much of the surrounding area. The lake is home to a variety of known habitat including: trout; smallmouth bass; turtles; loons; and black ducks. The lake flows into Third Lake, which eventually flows to the Shubenacadie River system. The applicant has identified the

watercourse and the 20 m setback requirement as per the Regional Plan and Sackville Land Use Bylaw.

Enabling Policy

Pursuant to Section 3.5 of the Regional Municipal Planning Strategy (RMPS), subdivision of land may proceed as an open space design development within the non-growth management areas of the Rural Commuter designation, through the process of a development agreement. Open Space Design Development is a form of development designed to conserve a connected system of open space. This process begins with the identification of primary and secondary conservation areas to be protected such as riparian buffers, wetlands, vernal pools, natural corridors, slopes exceeding 30%, rock It follows with the outcropping, archaeological sites, floodplains, and natural resources. identification of secondary conservation areas that should be protected or carefully developed. Building sites are then located on the lands where soils are best suited for development and are then connected through a common road system.

Rather than developing lands through a conventional as-of-right subdivision design Open Space Subdivision design allows for the clustering of residential development at a prescribed density so that the majority of the lands may be left as common open space. This common open space cannot be used for any other purpose than for passive recreation, forestry, agricultural or conservation-related use except for a portion of which may be used as a village common for active recreation or the location of community facilities designed to service the development. Attached for the Board's information is a copy of "A Guide to Open Space Design Development" (Attachment B). The attached guide provides an introduction to the concepts, application process, information and studies required to carry out the two forms (Classic and Hybrid) of open space design development in Halifax Regional Municipality.

Proposal

Development - Subject to the Policy S-16 of the Regional MPS, the applicant proposes to negotiate a development agreement that would consider the development of a Classic style open space subdivision. As proposed, the subdivision would consist of 14 single unit dwellings. As per the enabling policy, 14 dwelling units are in keeping with the maximum permitted density of 1 unit per acre. As proposed, 40 percent of the lands will be reserved for development while the remaining 60 percent will be retained as open space. As proposed, the applicant would like to retain a portion of the existing horse barn for use as an equestrian facility.

Servicing - The subject properties are located within the water service boundary. As such, the proposed development will be serviced with municipal water from Windgate Drive. With regard to sewage, the applicant is proposing the development of a "cluster style" on-site sewage system. As proposed, this style of system uses individual septic tanks to collect solids and grey water from each unit. Next, effluent from the tanks is directed to a common collection and treatment system. The common area will consist of a packed bed filter treatment system. Once treated, the effluent is introduced into the soil using drip irrigation. The applicant has provided a description of the proposed sewage treatment system, a copy is attached for the Board's review as Attachment C.

On-site wastewater disposal is regulated by the Province of Nova Scotia, as such any proposed onsite collection and treatment system is subject to the approval of Nova Scotia Environment. Through the development agreement mechanism, the applicant will be required to satisfy all provincial requirements prior to receiving any permits for development.

Watercourse - As there is a significant watercourse on the property, the applicant has provided information related to the watercourse setback requirements as prescribed in the Sackville Land Use By-law (LUB). As shown on the attached concept plan (Attachment A), the applicant has identified a 20 metre setback between the watercourse and any proposed development.

Development Agreement

Staff are in the process of negotiating a development agreement with the applicant, which has not yet been finalized.

Storm Water Management Plan and Erosion and Sedimentation Control Plan

Due to the presence of a watercourse on the subject property, as part of the development agreement, the applicant will be required to provide a storm water management plan and an erosion and sedimentation control plan prior to receiving permits for development. The applicant has provided a preliminary storm water management plan. A copy of the plan and a description of existing storm water conditions are attached for the Board's information as Attachment D.

Public Information Meeting

A public information meeting (PIM) was held on Monday, April 4, 2011 at 7:00 pm at the LWF Community Hall, 843 Fall River Road, Fall River. Planning staff and the applicant were present to identify the full scope of the proposal and receive comments. Several comments regarding on-site sewage treatment and wastewater management were received. An excerpt of the meeting minutes is provided for the Board's information as Attachment E.

Watershed Advisory Board

Pursuant to the Board's terms of reference, the Board's input with respect to the potential impact of this development on the watercourse is requested. Specifically, the Board is asked to consider:

- a) Environmental concerns related to the proposed development and in particular, potential effects on watercourses; and
- b) That the proposed site is suitable in terms of the steepness of grades, soil and geological conditions, locations of watercourses, marshes or bogs and susceptibility to flooding.

Further, with respect to the enabling Regional MPS Policy (S-16), the Board is asked to consider:

- 1. that the proposed roads and building sites do not significantly impact upon any primary conservation area, including riparian buffers, wetlands, 1 in 100 year floodplains, rock outcroppings, slopes in excess of 30%, agricultural soils and archaeological sites, and;
- 2. that the proposed development will not significantly impact any natural resource use and that there is sufficient buffering between any existing resource use and the proposed development to mitigate future community concerns.

Attachments & Maps:

Attachment AConcept PlanAttachment BA Guide to Open Space Design DevAttachment CLetter Regarding Proposed SewageAttachment DPreliminary Storm Water ManagerAttachment EExcerpt of Public Information Mee	Treatment System nent Plan
Attachment E Excerpt of Public Information Mee	ting Minutes

- Location and Zoning Map 1
- **Generalized Future Land Use** Map 2
- **Aerial Photograph** Map 3



Attachment B'



A Guide to

Open Space Design Development in Halifax Regional Municipality



May 2007

Introduction

Pursuant to Section 3.5 of the Regional Municipal Planning Strategy (RMPS), subdivision of land may proceed as an open space design development within the Agricultural, Rural Resource and, non-growth management areas of the Rural Commuter designation, through the process of a development agreement (Appendix 1 - Designations).

This Guide provides an introduction to the concepts, application process, information and studies required to carry out two forms of open space design development pursuant to polices S-15 and S-16 of the RMPS.

What is Open Space Design Development?

Open Space Design Development is a creative form of subdivision designed to conserve open space. The basic principle of the design is to locate homes on the portion of the site where the soils are best suited for development while retaining the remainder of the site as open space.



Randall Arendi

Hybrid Open Space Design Development

Policy S-15, of the RMPS, allows the development of a hybrid form of open space design within the Rural Commuter and Rural Resource designations. A hybrid open space design development preserves open space by restricting the area for lawns, pavement and buildings to a maximum of 20% of the lot. All of the open space within these subdivisions, except parkland, is located on large individually owned lots. The maximum density of this form of development is 1 unit per hectare.



Classic Open Space Design Development

Policy S-16, of the RMPS, allows the classic form of open space design development within the Rural Commuter, Rural Resource and Agricultural designations. A classic open space design development is preserves culturally and environmentally sensitive areas by clustering smaller lots on a maximum of 40% of the site and preserving 60% of the overall development as common open space. The maximum density of this form of development is 1 unit per 4000 square metres.



What is the process?

All open space design development agreement applications shall follow a two stage process. Stage 1 is a preliminary site design process intended to determine open space areas to be preserved and potential areas for development. Stage 2 involves the delineation of roads, lots, parks and other physical design features of the development. The Stage 2 Plan requires approval of the applicable community council in the form or a development agreement. If approved, the Stage 2 Plan forms the conceptual plan for future final subdivision applications under the *Regional Subdivision By-law*.

Stage 1: Preliminary Site Design

The Stage 1: Preliminary Design Process takes place in three steps as illustrated to the right. Applicants are required to submit **15 copies** of the **Step 3: Potential Development Areas Map**, showing the primary and secondary conservation areas, to be avoided. The map must also show the primary and secondary conservation features on adjacent lands for a distance of 300 metres on parcels of 40 ha or less and 600 metres on parcels greater than 40 ha. The applicant must also submit **1 reduced copy** of this Potential Development Areas Map, no larger than 11" x 17" in size.

Primary and Secondary conservation areas to be included, are outlined below:

Primary Conservation Features

- Minimum riparian buffers and watercourse setbacks as per the requirements of the applicable land use by-law
- All wetlands including those identified in the schedule of the applicable land use by-law
- □ The approximate 1:100 year flood plains
- □ Rock outcroppings that should be avoided
- Class 1 3 Agricultural Soils as identified in the Canada Land Inventory mapping http://geogratis.cgdi.gc.ca/cgi-bin/geogratis /cli/agriculture.pl
- In areas of Class 1-3 Agricultural Soils, describe and show the location of any agricultural activities on the property and in the specified context area
- Potential Archaeological Sites as shown on Map 11 - Areas of Elevated Archaeological Potential - of the RMPS
- □ Any groundwater recharge areas
- Significant Habitat and Endangered Species as shown on Map 5 of the RMPS



Step 2: Identify Secondary Conservation Areas





Adapted from Arendt, Randall. 1999. Growing Greener: Putting Conservation into Local Ordinances Natural Lands Trush http://www.greenerprospects.com/products.html (accessed September 13, 2006)

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Secondary Conservation Features		Preliminary proposed sewage treatment system and identification of soils and other			
	Scenic Views from within and onto the site from the surrounding area illustrated through maps and photographs	conditions capable of supporting the proposed system.			
	Any municipally or provincially registered heritage properties	Stage 1: Recommended Study To address wildfire safety concerns in the subdivision design, applicants are encouraged to review the Canadian Forest Service Fire Smart: Protecting Your Community from Wildfire at: www.partnersinprotection.ab.ca/downloads/.			
	Historic buildings, stone walls, pastoral landscapes, oldfields, meadows & other important features				
	Mature forests & other vegetation & comments on their health & condition	Review Process			
	Trails and natural networks shown on Map 3 - Trails and Natural Network - of the RMPS	Within 6-8 weeks following the filing of the completed Stage 1 information, the Planner shall:			
	Parks and natural corridors shown on Map 4 - Parks and Natural Corridors - of the RMPS	 circulate the proposal to all affected agencies and convene a meeting with the applicant and affected agencies to provide comment; 			
	Current & past land use , all buildings & structures, waste disposal sites, geo hazards such as sulphide bearing slates or areas subject to geological subsidence.	 schedule a visit to the site with the applicant; 			
St	age 1: Required Studies	 convene a public information meeting/workshop to receive public feedback on the potential development 			
In addition to the Potential Development Areas Map, the applicant must submit 3 copies of each of the following:		envelope (Policies S-15 and 16 deal with conservation site design features and any traffic and water related impacts; they do not authorize HRM to establish			
	Letter of intent outlining the rationale for the potential development area, total ha of	architectural controls on the proposed development);and			
	the site, total ha of potential development area, and proposed mix of land uses (See policy S-15 of the RMPS for permitted range of uses);	4. schedule and potentially meet with the applicable watershed advisory board to receive comments (dependant on WAB meeting schedule).			
	Traffic Impact Statement prepared in accordance with HRM's Guidelines for the	Stage 1 Sign-off			
	Preparation of Transportation Impact Studies;	Modifications may be required to the potential development area pending inter-agency review, public and watershed advisory board input. The Planner will notify the applicant when the potential development area proposal meets the policy requirements and regulations. The applicant may then prepare a Stage 2: Conceptual Site Design Plan.			
	Level 1 Groundwater Assessment Report_prepared in accordance with HRM's Guidelines for Groundwater Assessment and Reporting; and				

Stage 2: Conceptual Design

The Stage 2: Conceptual Design Process also takes place in three steps as illustrated to the right. Applicants are required to submit **15 copies** of the **Step 3: Conceptual Plan**, plus one reduced copy no larger than 11" x 17". The Step 3: Conceptual Plan must include the same information required in the *Regional Subdivision By-law* for concept plans (Appendix 2) including the following:

- □ Location and type of proposed land uses
- □ Total ha of the site, total ha of development area, and number of dwelling units;
- Proposed frontage, and front, side, and rear yard setbacks for each lot/unit;
- In a hybrid open space design development show development envelopes (disturbance areas not exceeding 20% of the lot) for each lot/unit, including areas for grading, lawns, pavement, buildings and septic systems;
- In a classic open space design, show location of communal or individual septic system areas;
- Total ha and location of areas to be retained as open space (conservation areas, parks, trails, etc.) and include a breakdown of total ha to be dedicated for public use and the total ha to be retained in non municipal ownership; and
- □ Trails and natural networks.

Stage 2: Required Studies & Information

The applicant shall also submit 3 copies of each of the following studies and plans, if required by HRM:

- Level 2 Groundwater Assessment Report prepared in accordance with HRM's Guidelines for Groundwater Assessment;
- □ **Traffic Impact Study** in accordance with HRM's *Guidelines for the Preparation of Transportation Impact Studies*;
- Proposed sewage treatment system prepared with a sufficient level of information for NSDEL to conclude that it is feasible to service the development;



Step 2: Identify Street and Trail Locations







Adapted from Arendt, Randall 1999 Growing Greener: Putting Conservation into Local Ordinances Natural Lands Trust http://www.greenerprospects.com/products.html (accessed September 13. 2006)

Stage 2: Required Studies Continued	Statutory Approval		
 Archaeological Assessment if required by the NS Museum; Stormwater Management Plan; 	The development agreement is brought forward to the respective Community Council pursuant to the requirements of the <i>Municipal</i> <i>Government Act</i> . In accordance with the Act,		
Maintenance Plan for long-term care of wells and septic systems for any communal system not managed by a Condominium Corporation pursuant to the Condominium Act; and	a public hearing must be held to receive public feedback on the proposed development. The decision of Community Council is also subject to a period for appeal before the Utility and Review Board.		
 Open Space Management Plan for the long-term restoration and management of open space areas. Stage 2: Recommended Study 	The agreement only takes effect after the appeal period has lapsed or any appeals have resulted in an approved agreement. Following the conclusion of the statutory process and the signing of the agreement, applications may be made for final subdivision approval pursuant to		
To address wildfire safety concerns when siting and designing houses, applicants are encouraged to review the Nova Scotia, Department of Natural Resources. "How to Protect Your Home and Property from Wildfire".	the agreement and the <i>Regional Subdivision</i> <i>By-law.</i> Where do I apply? Please contact one of HRM's Planning Services Offices before preparing plans for submission:		
Review Process			
Within 6 to 8 weeks following the filing of the completed Stage 2 information, the Planner shall:	Dartmouth Planning Services Office Alderney Gate 40 Alderney Drive, 2 nd Floor Dartmouth, NS, B2Y 4P8 902-490-4472		
 circulate the proposal to all affected agencies and convene a meeting with the applicant and affected agencies to provide comment: and 	Halifax Planning Services Office West End Mall 6960 Mumford Road Halifax, NS, B3L 4P1		
2. schedule and potentially meet with the applicable watershed advisory board to receive comments (dependant on WAB meeting schedule).	902-490-4393 Sackville Planning Services Office Acadia Centre 636 Sackville Drive		
Stage 2 Sign-off	Lower Sackville, NS, B4C 2S3		
Modifications may be required to the	902-869-4360		
Conceptual Plan pending inter-agency review. The Planner will notify the applicant when the Conceptual Plan meets the requirements of the policy and all applicable regulations. Following Stage 2 Sign-off, the Planner will prepare a report and development agreement.	Additional Resources Randall Arendt's publications: www.greenerprospects.com/products.html		

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Attachment C'

LAND DEVELOPMENT SERVICES

PMDI.

March 1, 2010

Tyson Simms Halifax Regional Municipality PO Box 1749 Halifax NS B3J 3A5

Dear Mr. Simms:

Re: Windgate Subdivision (Case 01354) Condominium Cluster Development, Sewage Treatment Management Plan

PO Box 5062 Waverley NS B2R 1S2

The method chosen for sewage treatment for Windgate Farm and described within this letter is consistent with the recommendations found in HRM's "Small Scale Servicing Study" (www.halifax.ca/regionalplanning/publications/documents/HRM Small Scale Report.pdf), which was a part of the background work for the new Regional Plan.

The concept plan for Windgate Farm Subdivision depicts a pre-design small sewage collection, treatment and dispersal system for the 15 condominium units. This preliminary "cluster" design is considered the most efficient sewage management approach available today.

This form of sewage management uses individual septic tanks to which solids and grey water is initially collected before the effluent from these tanks are then directed to a common collection and treatment system. The effluent from the individual septic tanks will collect in the common area where a packed bed filter treatment system treats the liquid to a very high quality effluent. This treated effluent is then introduced into the soil using drip irrigation.

The specific type of packed filter bed has not yet been determined, but will most likely be a Waterloo Biofilter or a recirculating sand filter. The location of this system is shown on the concept plan

Drip irrigation is a technique, which has become increasingly popular in Nova Scotia since it has been proven to be effective all year round regardless of weather conditions. These drip irrigation beds can be located in any public open space area such as golf courses, sports fields, lawns, etc. The size of the drip bed shown on the concept plan was based on estimated water use from the projected number of residents and was done so conservatively, assuming poor soil conditions and maximum water usage. The water supply for this development is to be provided by the Halifax Water's central piped system and therefore the ability to find a suitable location and integration of the drip irrigation bed will be of little concern, considering there are no wells on site to be impacted.

The benefit of a condo funded sewage treatment system is that, unlike private residences with on-site sewage systems, allocated condo fees will be paid by every condo owner to maintain and service the sewage treatment management system. This means that, unlike individual property owners with on-site septic, condo septic tanks will be pumped on a regular scheduled basis, along with scheduled service checks and maintenance of the packed bed filter system and drip bed. This format along with the education of condo owners on what can and cannot be put into a septic system assures the maximum efficiency of the sewage treatment system.

PO Box 5062 Waverley NS B2R 1S2 Of course, it goes without saying that the system would be performed to equal or better standards and specifications of NSDOE.

If you have any questions or require more information with respect to this part of the project please feel free to contact me at

Sincerely,

Chris Macaulay Land Consultant Owner PMDL

SHORE CONSULTANTS LIMITED

Surveving Engineering Development syngulting

10404017 5989

Mr. Tyson Simms Planner Halifax Regional Municipality Planning And Development Services 636 Sackville Drive Lower Sackville Halifax County, N.S. B4C 2S3

RE: Windgate Farm Subdivision, Windsor Junction, Halifax County, N.S., Lands of Powder Mill Developments Limited. (Case 01354)

Dear Mr. Simms:

Please be advised that I have visited the subject property and have reviewed the Concept Plan for the proposed development.

This development is proposed to conform to the conventional open space design concept, pursuant to the Municipality's Regional Plan. This means that the fifteen dwelling units proposed will be serviced by a common wastewater management system. The site can be serviced with the municipal water supply:

The concept plan suggests that the dwelling units will be placed outside of the watercourse buffe, and stretched along the shoreline of Second Lake.

The plan also suggests a site for a recirculating sand filter sewage treatment system. This area was visited, and appears to be a potential area for a wastewater treatment system.

Although the plan suggests a recirculating sand filter, the potential for an appropriate on site sewage disposal system will be investigated. An on-site system is the preferred method of sewage disposal, as they are more economical and there is less maintenance involved in their operation.

If the soil conditions are not conducive to the installation of an on-site system, alternatives, such as a controllating sand filter, or more likely a textile filtering system will be employed. Either of these alternative will use a drip increation system to dispose of the treated wastewater. This method is becoming the standard for treated effluent disposal.

As previously mentioned, the area depicted on the Concept Plan appears to be suitable in size and topography for such purposes. As for the management of stormwater, the property is bounded by a railway and Second Lake. The railway acts as a stormwater interceptor now, thus protecting the property from the potential of excessive upstream flow. The stormwater that must be managed for the proposed development is therefore substantially only the precipitation which falls on the property. This amount of stormwater will be relatively easy to manage.

All of the stormwater will be encouraged to infiltrate into the ground through the use of infiltration drains, possibly retention areas, and permeable landscaping. The watercourse buffer area will also act to protect the lake from any undesirable run-off.

Detailed plans of both the wastewater management and the stormwater management schemes will be provided in due course.

In conclusion, it appears that their should be limited difficulty in servicing the proposed development in an efficient and environmentally friendly manner

If you have any questions or concerns regarding this or any other matter, please do not besitate to give me a call

I trust that this is sufficient to your current needs.

Thank you.

Sincerely,

Pobert B. Ashley, P Eng , C.L.S , N.S.L.S.





March 1, 2010

Tyson Simms Halifax Regional Municipality PO Box 1749 Halifax NS B3J 3A5

Dear Mr. Simms:

Re: Windgate Subdivision (Case 01354) Condominium Cluster Development, Stormwater Management Plan

The Open Space Development Guidelines lends itself very well to the proper management of stormwater runoff from developed areas. This is because the housing development is concentrated in clusters, while larger areas of land are left untouched. The lawns for each property, the roofs, driveways, and access roads will impact stormwater runoff. However, considering only a maximum of 40% of the land will be developed, there should be very little challenge with respect to good management of the runoff from such a development as being proposed.

The main concern with respect to stormwater runoff management is that the property is currently used as a Horse Farm, with several grass paddocks, a large outside riding ring and a building measuring 300×60 ft. These areas are already subject to considerable stormwater runoff and need to be considered when calculating and designing a management system for the proposed subdivision. Presently the runoff flows across these open areas, and shows visible signs of stress to the low lying collection areas adjacent to the lake. The proposed development can certainly improve and correct this present lack of management, by redirecting and balancing much of the runoff across the property to minimize impacts and promote infiltration.

There is little to no concerns about how much water might be entering from above, as the subject property is surrounded by a railway line that has a current drainage ditch running parallel to the track. This ditching collects all the runoff from the higher elevations on the north side of Windgate Drive and diverts it to both the east and west end of the said property, but well outside the area of development. It would appear then, the only runoff to manage would be found locally on-site.

So the design of stormwater management systems for the proposed development can focus on dealing with runoff from the new work and the present runoff issues associated with the horse farm, but not be concerned with managing peak flows from the higher elevations. This makes sense because the railway cut removes any water from above.

PO Box 5062 Waverley NS B2R IS2

The balance of peak flows should be achievable. The land is generally uniform in elevation from end to end with a very gentle slope toward the lake. The concept's goal is to acquire a true balance of pre and post development hydrographs, not just peak flows. This goal will be approached by implementing stormwater Best Management Practices. The possible use of infiltration inducement devices such as strip trenches, dry ponds, subterranean storage areas, and contour based diffusers as outfalls or storage from small, local storm collection will allow for the introduction of rainfall into the ground in a



manner close to the percentage or better that now infiltrates. The open space design should allow for Best Practices to be followed, eliminating the chance of runoff to collect in areas that would be unmanageable during peak flow. Ditches will be required to protect road infrastructure and to divert overland run-off, but the goal will be to utilize Best Practice techniques, minimizing impact at the outlet on the downstream environment, without creating the maintenance and visual issues of stormwater management ponds.

The ability to successfully meet pre and post balanced hydrograph for the development is aided by the fact that much of the property presently discharges greater peak flows and volume than a fully wooded area and the fact that the soils are somewhat clayey and do not allow for much infiltration in its pre-development condition. Considering the land is already compromised when compared to a fully wooded area, we should be able to not only easily achieve pre and post development hydrograph, but actually improve upon the infiltrative capacity of the land through the techniques previously mentioned, as well as by reforestation efforts.

What has been discussed in this report is much like the plan, conceptual in nature. Until a more detailed geotechnical report is completed it is difficult to determine what will be required to achieve a balanced hydrograph. Be that as it may, this report should demonstrate the process we intend to follow and the benchmarks we hope to achieve ...not only balance, but a much more improved ability for infiltration of stormwater. This goal objective will be accomplished by following or surpassing the use of HRM's stormwater Best Management Practices.

If you have any questions, please feel free to contact me at anytime.

Sincerely,

Chris Macaulay Land Consultant President PMDL

PO Box 5062 Waverley NS B2R IS2

SHORE CONSULTANTS LIMITED

Surveying Ecgineering Development Consulting

10/07/23 5989

Mr. Tyson Simms Planner Halifax Regional Municipality Planning And Development Services 636 Sackville Drive Lower Sackville Halifax County, N.S B4C 2S3

RE: Windgate Farm Subdivision, Windsor Junction, Halifax County, N.S., Lands of Powder Mill Developments Limited. (Case 01354)

Dear Mr Simms:

Further to my letter of April 27, 2010, I have the following additional comments.

I have reviewed the Concept Plan prepared by Alan Gallant, N.S.L.S., and the report entitled "Re: Windgate Subdivision (Case 01354) Condominium Cluster Development, Stormwater Management Plan", dated May 27th, 2010 addressed to Mr. Tyson Simms, prepared by Chris Maccaulay, and do substantially concur with the general statements and stormwater management schemes depicted and stated therein/thereon.

If you have any questions or concerns regarding this or any other matter, please do not hesitate to give me a call.

I trust that this is sufficient to your current needs.

Thank you

Sincerely

Robert B. Ashley, P.Eng., C L.S., M.S L.S.



'Attachment E'

HALIFAX REGIONAL MUNICIPALITY PUBLIC INFORMATION MEETING CASE NO. 15969 – Powder Mill Developments - 156 Windgate Drive, Windsor Junction

Monday, April 4, 2011 7:00 p.m. LWF Community Hall

STAFF IN ATTENDANCE:	Tyson Simms, Planner, HRM Planning Services Thea Langille, Planning Supervisor, HRM Planning Services Alden Thurston, Planning Technician, HRM Planning Services Cara McFarlane, Planning Controller, HRM Planning Services
ALSO IN ATTENDANCE:	Councillor Barry Dalrymple, District 2 Councillor Bob Harvey, District 20 Chris Macaulay, Powder Mill Developments, Applicant
PUBLIC IN ATTENDANCE:	Approximately 60

1. Call to order, purpose of meeting – Tyson Simms

The public information meeting (PIM) was called to order at approximately 7:00 p.m. at LWF Community Hall. Mr. Simms introduced his colleagues, Thea Langille, Alden Thurston and Cara McFarlane; Councillor Barry Dalrymple, District 2; Councillor Bob Harvey, District 20; and the applicant, Chris Macaulay.

The purpose of the meeting is to identify that HRM has received an application, explain the proposal and planning process involved, and receive feedback, comments and questions from members of the public.

No decisions will be made at tonight's meeting. Any decisions would be made at a later date by Marine Drive, Valley and Canal Community Council.

2. Overview of planning process – Tyson Simms

The PIM is the first step in the application process. HRM will then have an internal staff review where external agencies (including NSE) will be invited. The proposal will be reviewed by the Halifax Watershed Advisory Board (HWAB). Staff will draft a staff report with a recommendation to Marine Drive, Valley and Canal Community Council (MDVCCC) along with a draft development agreement. MDVCCC will decide whether or not they want to enter into the agreement. Once a decision is rendered regarding the agreement, there is a 14 day appeal process through the Nova Scotia Utility and Review Board for either the applicant or members of the public to appeal that decision.

3. Presentation of Proposal – Tyson Simms

The PIM is for Case No. 15969 which relates to a classic open space subdivision application at 156 Windgate Drive in Windsor Junction. The property is subject to two parcels (shown). Combined, these parcels add to approximately 14.2 acres in size.

The applicant has requested a development agreement to develop these properties through what is known as the classic open space design process. The proposal is for a bare land condominium consisting of 14 single unit dwellings.

Conventional and rural style subdivisions (large scale developments that particularly require onsite well and septic) are no longer encouraged through the Regional Plan policy. The policy does however allow for the subdivision of lands designated Rural Commuter by way of an open space style of development. Through this policy, the Regional Plan aims to focus development away from sensitive areas and preserve corridors or open space. Open space projects are approved through the development agreement process. Mr. Simms defined a development agreement and process involved.

There are two types of open space design, the hybrid and classic style of development. The applicant is proposing a classic open space design. This allows for one unit per acre where 60% of the property is retained in single ownership for open space uses. In this case, the ownership would be a condo corporation.

There is a set of enabling criteria and questions that council will look at to ensure that the proposal has met policy. Some of the criteria from Policy S-16 (enabling policy) were identified. Council will consider: that there is sufficient traffic capacity to service the development; the types of land uses to be included in the development; soil conditions and other relevant criteria to support that on-site sewage disposal can be met; the lot frontages and yards required to minimize the extent of road development to cluster building sites on the parcel and provide appropriate fire safety separations; that the development is designed to retain the non-disturbance areas and to maintain the connectivity with any open space on adjacent parcels; and that the proposed roads and building sites do not significantly impact upon any primary conservation area including repairing buffers, wetlands, areas designated in the 1:100 year floodplains, slopes in excess of 30%, agricultural soils, archeological sites, etc.

This proposal is for a classic open space design project where 60% of the overall site must remain as open space and owned by one entity. If that one entity is a bare land condominium corporation, as in tonight's proposal, the condominium corporation will own the entire site. There will only be a private driveway (no public streets).

Referring to the site plan, 60% of the site will be left as open space which includes a watercourse buffer (indicated on plan), and some amenity space (a portion of the equestrian facility and existing trails on the property). All of the housing infrastructure will be located within the remaining 40% which can be developed. Fourteen houses are proposed which is in keeping with the permitted density of one unit per acre. The houses will be serviced with water as they are located within the water service boundary and sewage will be through a shared cluster septic system and supporting infrastructure. Details on the system's design are regulated through Nova Scotia Environment (NSE) not HRM. Access will be provided through a private driveway coming off of Windgate Drive. The private driveway will be owned and maintained by the condominium corporation.

Presentation of Proposal - Chris Macaulay, Powder Mills Development

A proposal for Stage I was submitted in November 2009, and completed in January 2010. A meeting with internal and external agencies for review of Stage II planning and development was held in December 2010. So far, it has been close to a two year project.

The site is 156 Windgate Drive, Windsor Junction, roughly 14.2 acres which was used as a farm at one point but has been used as a horse stable for the past 20+ years. The land is surrounded by Second Lake to the south, a railway to the north and one abutting neighbor at the western edge. The land is zoned R-6 (Rural Residential).

The proposal is to do the development as a classic open space concept as per HRM policy under a condominium design. Essentially 14 single unit dwellings on roughly 1,250 square metre condominium lots. The entire parcel will belong to the condo corporation. There will be on-site sewage designed by an engineer. The property is in the water district; therefore, there will be city water. The plan is to reduce the number of horses. The Windsor-Hants Railway wanted the present location of the driveway moved and improved. They see this development as a benefit to provide a better entrance to the facility. The private driveway will be owned by the condominium corporation but will look like an HRM road because it will be built to emergency standards.

Residential development will occupy 40% of the land mass. The new location of the driveway (further to the west) was shown. A portion of the existing building will be removed to allow a more level and better access. Essentially, the lots shown in the plan and the actual private road make up 40% of the land mass that can be disturbed. The remainder, 60%, of the land mass will be left as green, recreational or agricultural space to be owned and maintained by the condominium corporation. Equestrian recreation use will be allowed on the site although it will be reduced; however, improvemend to stables, trails, paddocks and a riding arena are planned. Other potential uses for the site are walking trails and possibly some sort of organic gardening or agriculture purpose that meet the criteria.

Before moving forward, a traffic impact study was completed by Atlantic Road and Traffic Management Engineers. The study found that there was no significant impact with 14 houses from that site but suggested a better access point which is the reason why it's been moved.

Qualified people have had to look at the amount of stormwater and how it will be handled onsite. No challenges or anything too complex were perceived. Most of the runoff from higher elevations (Charleswood) that heads down towards Windgate Farm is actually caught at the railway through the interceptor ditches and then directed through the culverts and eventually down into Second Lake. It doesn't actually come across the property. Therefore, the only water that has to be dealt with is the rain water that falls on the property which gently slopes to the lake. Infiltration inducement devices, such as infiltration drenches, dry ponds, etc., will be used on the site. The plan also shows green space between lots to improve upon infiltration so that the water can get back down to the watertable. Wastewater Management Plan – Engineers have suggested that finding a suitable location within the 60% of land mass available should not be difficult. The topography of the land is a plus because the slope is fairly generous. Soil conditions are also good and the limited stormwater runoff makes this for a highly efficient design. Each house will have its own holding tank. The holding tank will be pumped on a regular basis and then fed into a common field. There will be a contracted scheduled pumping and monitoring of the field. There is no plan to pump fluids down to Second Lake or any streams around the area.

Mr. Macaulay read the following from an engineer regarding the importance of a management system being in place to deal with regular monitoring and maintenance:

"New technologies have proven to be very effective in managing wastewater, while also providing very little cost for the ongoing maintenance. However, it is still necessary to ensure that there is a management system in place to deal with regular monitoring and maintenance. To alleviate this concern, Service Nova Scotia created the instrument "Wastewater Management Districts and Bare Land Condominiums". It was created to provide adequate legal status to shoulder the responsibility of operating a shared system. This instrument would allow for the Windgate Farm Condo Corporation to be created and effectively manage the planned pumping intervals for the individual septic holding tanks and accrue funds from the condo owners for ongoing maintenance, repair and replacement of the "sewage system"."

Summary – residential development including the private roadway and individual driveways will occupy 40% of the land; 60% of the land must remain green or for recreational space; the traffic studies found no significant traffic impacts; stormwater can be handled adequately on-site; sewage will meet or surpass the NSE regulations; and the proposed development will meet the intentions of the open space subdivision under Policy S-15/S-16.

Mr. Macaulay went over the site plan. The houses are closer to the private road making the length of the individual driveways shorter in order to provide better conditions for the water to get back into the watertable. A portion of the barn will be removed as well as another one. The look of the barn will be improved and the number of horses reduced. A common gathering field for the residents will be provided. He pointed out the location for a recirculating sand filter and drip bed, but that could change once the geological testing is done. There is the possibility that particular technology mentioned may not be used. The decision will be based on what is found once more testing is done. NSE may want a different type of system there.

4. Questions and Comments

Rachel Shupe, Windsor Junction, is concerned about water runoff from where the land is going to be disturbed. The silt will ruin the lake and wildlife. This year, muck ended up in Second Lake when the ditches were being dug. Mr. Macaulay mentioned that their concern is what water falls on the property because the water from the higher elevations is intercepted by the railway and works its way either east or west. He is aware of the silt runoff and it will be handled through best practices in managing and maintaining it. Mr. Simms mentioned that a preliminary staff review of this proposal was done but there will be more staff reviews after this meeting. Therefore, issues related to drainage and runoff will certainly be looked at very closely by the HRM Development Engineer and his staff. Mr. Grimes asked if each individual condo unit will have a holding tank. Mr. Macaulay said that is the intent. The holding tanks will then be pumped off to what could be a large sand field. However, depending on what the engineers say, that could change.

Mr. Grimes said the lake has a very slow flowing system. Second Lake leads into Third and a whole chain of lakes. If anything does get into it, all the lakes will be destroyed. Mr. Macaulay said the engineers will design the system and it will be monitored on a regular basis. Mr. Simms said that NSE will be largely involved in this process to determine what facilities will suffice to treat the affluent that is discharged from the homes.

Rick Clark, Windsor Junction, is concerned if Environment Canada oversees the process of the septic. Basically, the solids are gravity fed and all of the liquids are pumped into a common field for 14 houses. These systems fail during certain times of the year (thaws in the spring, big snow mass, power failures, large amounts of rain). It happens to people who have these typical systems on their properties now. The isolated one pump system here and there on a property surrounding a lake is not a big deal. There are going to be times when the lake will be inundated with dirty water from that common field with 14 houses pumping into it. Mr. Simms said it would be specifically NSE overseeing this. He made it very clear that what is proposed in terms of the technology (a common field or a sand drip filter irrigation system) has yet to be determined. NSE has made it very clear that soil testing will have to be done on this site to determine what the appropriate system will be.

Lindsay Clark, Windsor Junction, asked that when looking at these different systems, consideration be made for people who live on the lake that drink the water. Mr. Simms said that the Province, NSE, is the agency that question would be directed to.

Wayne Loftus, Sackville, asked if there are any plans for a boat ramp. Mr. Macaulay said he hasn't thought about that. There is currently a common area where smaller boats are put in the water. Mr. Simms explained that because this application is subject to a development agreement, staff and council can look at specific things before making a decision to either approve or not approve the agreement. The buffer area (shown) of 20 meters has been identified as part of that 60% portion for open space. There are strict requirements in the land use by-law in terms of what encroachments are not permitted within that 20 metre buffer. He believes that one of the encroachments is potentially a boat ramp. Mr. Loftus is concerned about having a boat ramp allowing the public to launch their boats. Mr. Macaulay said that the property is privately owned; therefore, the public will not have access.

Gerald Briand, Windsor Junction, wondered if the houses will be bought or rented. Mr. Simms said by definition, they could be either rented or they would assume one part in the larger condominium association. Mr. Macaulay said it is not their intent to rent; however, if someone buys one of the units, they could rent it.

Marilyn Challis, Sackville, read a newspaper article titled "Second Lake Has Been Saved" from the Bedford/Sackville Newspaper on February 17, 1999. The article referred to development around Second Lake and how the land should be preserved as parkland to protect the quality of the lake. Mr. Simms mentioned that her comment would be part of the public record.

One resident mentioned that a reduction in the number of horses will help.

The resident mentioned that Second Lake is the last lake in metro that is fit to drink out of. The land has probably 40 years of horse manure impregnated into it. Currently, there are problems with a collapsed culvert at the crossing of the railroad causing levels to rise unusually high and eroding the shore line. These are things that need to be looked at.

Roger Gauvin, Sackville, wondered if there has been any consideration environmentally. There are going to be 14 homes with potential oil tanks. Mr. Macaulay is not sure about this issue. The property does face south and the barn has a big roof possibly enabling solar paneling. He is very much for reducing energy costs and consumption. Mr. Gauvin said the government could control that.

Amanda Silver, Windsor Junction, asked if the land will be owned by a condominium corporation and is the applicant going to oversee the sewage treatment system. Are there going to be condominium fees and property taxes associated with owning a house on the property? Mr. Macaulay said the whole concept of a condominium corporation for individual homes is something relatively new. The property tax base this particular property will be a new process for HRM as well. There will be condominium fees charged to each home owner, a monthly fee, which will accumulate in a trust account and eventually go to pay the tax bill and towards maintenance for engineering, septic systems, pumping of the septic tanks, and maintenance of the roads. Mr. Simms explained that the applicant is required to establish a condominium association through the Province. The applicant will have to inquire as to what their regulations and requirements are in terms of how they assess the property and how it is taxed.

Pam Tracey, Windsor Junction, believes because of the nature of the land and narrow shoulders, the land probably is not developable under any other system. This community doesn't have much high density cluster units. Conventionally developed, only four or five properties would be allowed on the site. She also wondered if an environmental assessment of the land has to be done because of the large piles of manure on the property. The runoff from all the manure and mud that goes into the lake, will destroy the wilderness area and the lake. Mr. Simms said NSE will look at soils on these lands and determine if there is any contamination that has to be removed especially during the phase where they try to introduce a septic system on this site.

Walter Regan, Sackville Rivers Association, Sackville, believes that it is very important to have a water receiving study done of the lake and hopes this will be included in discussions. Mr. Simms advised that the application is subject to review by HWAB. If the board deems those requirements are necessary, staff can look at requesting such studies. He will discuss with staff regarding a water receiving study.

Mr. Regan asked if there will be standby diesel installed for the sewage treatment plant in case of a power failure. Mr. Simms is not sure of the specifics in terms of the design of the system.

Mr. Regan asked if it would be possible to get large bonding for sedimentation and erosion control in case there is a spill into the lake. Mr. Simms said sometimes through the agreement process, securities and bonding can be required. He'll look into it.

Mr. Regan asked if there will be nitrate manure treatment done. Mr. Simms said this is a question specifically for NSE. HRM doesn't necessarily get involved in terms of treating manure. Depending on the size of the manure pile and specific scenario, the Province does

regulate this to some extent.

Mr. Regan is pleased to see that there is such a large area being protected. Is it possible that HRM could buy the entire site and compliment the present park?

Shane O'Neil, Second Lake Regional Park Association, Sackville, said the association has been trying to protect the water quality of Second Lake as much as possible and recognize that the entire lake shore is not owned by the Province. There are rights that the other land owners have. The homes built along the shore did affect the viewplane from the parkland. He recommends that HRM take ownership of a portion of the land within the 20 metre buffer. He understands that within this condominium development approach, a buffer can include the development of wharfs, walkways, various other acitivites even laneway, outbuildings, etc. It would give us some limited protection of the viewplane from the park and might still be a way for the land owners to have that buffer protected and not slowly erode over time. Mr. Simms said that because this is going through the development agreement process, we can look at things such as non-disturbance areas. We'll take that comment under advisement.

Councillor Dalrymple thanked everyone for coming to the meeting and said that it is important to hear from the public before proceeding too far into the process. The public hearing for this application, once scheduled, will more than likely be held in District 2.

Mr. Simms thanked everyone for coming and expressing their comments and concerns.

5. Adjournment

The meeting adjourned at approximately 8:45 p.m.





