

May 10, 2010

Louisette Lanteigne 700 Starflower Avenue Waterloo, ON N2V 2L2

Dear Ms. Lanteigne,

RE:Freedom of Information Request: West Side PiezometersFILE NO:A17-019-2010

We acknowledge receipt of your request pursuant to the *Municipal Freedom of Information and Protection of Privacy Act* (the Act), on April 23, 2010 for:

"An Ontario Municipal Board hearing case PL071044 secured concessions by way of 2 Technical Expert Meetings. At the Technical Experts Meeting – Water, Item #3 mandated the installation of mini-piezometers in Clair Creek. Planner Joel Cotter stated to me by email that they were installed in September 2009. I request the permits/records of installation, the start date of testing, and a map of their current location.

Re. 30T-97024, 30T-05403, 30T-05402 Draft Plan of Subdivision for West Side Lands."

Attached is an Index of Records responsive to your request, together with copies of documents released in whole or in part as noted in the Index. The reasons for denying access to certain records or portions of records and the relevant sections of the Act are detailed in the Index.

Enclosed are records which indicate the current locations of the mini-piezometers (referred to as boreholes within the responsive records), the start date of testing, and any record of installation. Please be advised that as permits are not required for the installation of boreholes, we have no records responsive to your request for permits.

The Act contemplates a user-pay principle. Pursuant to Section 45 of the Act and Ontario Regulation 823, the costs of responding to a request for information are recoverable at the rate of \$30.00 per hour for staff time, plus photocopying costs at the rate of \$0.20 per page. Please note we have waived costs at this time, however, subsequent costs resulting from an appeal, a review or a new request may apply in the future.

Waterloo City Centre 100 Regina Street South, Waterloo Ontario N2J 4A8 = T: 519-886-1550 F: 519-747-8760 TTY: 1-866-786-3941 = www.waterloo.ca

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You may request a review of this by writing to:

The Information and Privacy Commissioner/Ontario 2 Bloor Street East, Suite 1400 Toronto, Ontario M4W 1A8.

Please note that you must request a review within 30 days of receipt of this response.

If you would like to appeal this decision, please provide the Commissioner's Office with the following:

- 1) the file number listed at the beginning of this letter;
- 2) a copy of this decision letter;
- 3) a copy of the original request for information which you sent to the City of Waterloo.

In addition, you must send an appeal fee to the Commissioner's office. If your request was for your personal information, the appeal fee is \$10.00. The appeal fee for all other requests for information is \$25.00. Please include the fee in your letter of appeal. Appeal fees should be in the form of either a cheque or money order made payable to the Minister of Finance.

Yours truly,

Lindsay Walden B.PAPM, M.IPP Elections & FOI Coordinator T 519.747.8704 | F 519.747.8510 lindsay.walden@waterloo.ca



Index of Records

Access Request, Municipal Freedom of Information and Protection of Privacy Act

West Side Piezometers

City of Waterloo File No. A17-019-2010 May 10, 2010

"An Ontario Municipal Board hearing case PL071044 secured concessions by way of 2 Technical Expert Meetings. At the Technical Experts Meeting – Water, Item #3 mandated the installation of minipiezometers in Clair Creek. Planner Joel Cotter stated to me by email that they were installed in September 2009. I request the permits/records of installation, the start date of testing, and a map of their current location.

Re. 30T-97024, 30T-05403, 30T-05402 Draft Plan of Subdivision for West Side Lands."

Doc. No.	General Description	Date	Release (yes/no)	Section Applied	Comments	No. of Pages
1	Email / P. Fitzgerald, J. Cotter	Mar 16, 2010	Yes			2
2	Email / J. Grubb, J. Cotter, L.B. Bulford, K. Eby	Nov 4, 2009	Yes			1
3	Report / Additional Groundwater Monitoring Well Installations	Oct 27, 2009	Yes			7

Joel Cotter

Fron	n:
Sent	:
To:	
Cc:	
Subj	ect:
Atta	chments:

Fitzgerald, Peter [Peter.Fitzgerald@stantec.com] Tuesday, March 16, 2010 5:40 PM Joel Cotter Jones, Martin RE: West Side Subdivisions - Groundwater Monitoring Attachments.zip

Here's another copy of the LVM Naylor report, that was originally provided to the following on November 4, 2009. Term Mini-piezometers wasn't used but I'm sure this is what you are looking for.

From: Grubb, Joe

Sent: Wednesday, November 04, 2009 8:16 AM

To: Joel Cotter; Lisa Beth Bulford; Kevin Eby

Cc: Johnston, Craig (Kitchener); Robertson, Scott; 'Douglas Stewart'

Subject: Waterloo West Side Lands - OMB Case No. PL071044 Vista Hills - Additional Monitoring Wells Completed

Attached for your information and files is the report relating to the advancement of 3 additional boreholes as agreed to at the OMB mediation. The monitoring wells were completed on September 29th and were immediately included in the monitoring program carried out by Stantec Consulting on the West Side Lands.

Please let us know if you require anything further.

Regards

Peter Fitzgerald, P. Eng. Project Manager Stantec 49 Frederick Street Kitchener ON N2H 6M7 Ph: (519) 585-7437 Fx: (519) 579-8664 Cell: (226) 808-3523 peter.fitzgerald@stantec.com stantec.com

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From: Joel Cotter [mailto:Joel.Cotter@waterloo.ca] Sent: Tuesday, March 16, 2010 4:59 PM To: Jones, Martin

1

Cc: Fitzgerald, Peter

Subject: West Side Subdivisions - Groundwater Monitoring

Martin,

I hope all is well. I received an email from Ms. Louisette Lanteigne asking whether-or-not the mini piezometers have been installed next to Clair Creek, and if so when. She would like to inform her hydrologist. If you recall, during the experts meeting for OMB PL071044 (West Side Subdivisions), the water experts agreed to the installation of additional mini piezometers (2 or 3) along the North Branch of Clair Creek to allow additional data collection during the on-going pre-development monitoring program. Craig Johnston (Stantec) represented the developers at the water experts meeting. It is my understanding that the mini piezometers were installed, but I do not have records to confirm when they were installed. Your assistance in this matter is appreciated.

Regards,

JOEL COTTER MCIP RPP

Development Services City of Waterloo tel: 519.747.8543 fax: 519.747.8523 e: joel.cotter@waterloo.ca TTY 1.866.786.3941

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Joel Cotter

From:	Grubb, Joe [joe.grubb@stantec.com] Wednesday, November 04, 2009 8:16 AM
Sent:	
To:	Joel Cotter; Lisa Beth Bulford; Kevin Eby
Cc:	Johnston, Craig (Kitchener); Robertson, Scott; Douglas Stewart
Subject:	Waterloo West Side Lands - OMB Case No. PL071044 Vista Hills - Additional Monitoring
	Wells Completed
Attachments:	Attachments.zip

Attached for your information and files is the report relating to the advancement of 3 additional boreholes as agreed to at the OMB mediation. The monitoring wells were completed on September 29th and were immediately included in the monitoring program carried out by Stantec Consulting on the West Side Lands.

<<4489H9.L02.pdf>> Joe Grubb, C.E.T. Senior Associate Stantec Ph: (519) 585-7279 Fx: (519) 579-8664 joe.grubb@stantec.com stantec.com

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LVM NAYLOR

LVM-Naylor Division of Naylor Engineering Associates Ltd.

> 353 Bridge Street East Kitchener (Ontario) Canada N2K 2Y5 Telephone: 519.741.1313 Fax: 519.741.5422 www.lvmnaylor.com

EMAIL TRANSMISSION

October 27, 2009

Stantec Consulting Ltd. 49 Frederick Street Kitchener, Ontario N2H 6M7

Attention: Mr. Joe Grubb, C.E.T.

Subject: Additional Groundwater Monitoring Well Installations Vista Hills Subdivision Wilmot Line Waterloo, Ontario 4489H9.L02

Dear Sir:

LVM-Naylor is pleased to submit this summary of the field work recently completed at the above referenced property.

The current field program involved the advancement of three boreholes to depths between 5.18 and 8.08 metres below ground surface to identify the subsurface soil and groundwater conditions. The boreholes were advanced on September 29, 2009, by Geo-Environmental Drilling Inc. under the full-time observation of a senior technician from LVM-Naylor using a CME-75 track-mounted drillrig equipped with continuous flight hollow stem augers at the locations shown on the appended Site Plan.

Soil samples were recovered from the boreholes at regular 0.75 and 1.50 m depth intervals using a 50 mm diameter split-spoon sampler in accordance with the Standard Penetration Test (SPT) procedure (ASTM D1586). All soil samples obtained from the boreholes were submitted for moisture content analysis.

The laboratory results for moisture content are presented on the appended borehole logs. As shown on the appended logs, the subsurface stratigraphy varied considerably between the boreholes. In Borehole (BH) 1001, a thin layer of sandy silt topsoil was found overtop of sand deposits, beneath which silt deposits were found. In BH 1002, a layer of clayey silt was found between deposits of peat and marl. In BH 1003, silty topsoil was found overtop of a layer of silt, and deposits of silt and sand.

The borehole locations were surveyed by Stantec Consulting Ltd. and supplied to LVM-Naylor in CAD format. It is understood that the elevations are related to a geodetic datum.

As part of the borehole drilling program, monitoring wells were installed for ongoing measurement of groundwater levels. The 50 mm diameter monitoring wells were constructed by inserting slotted, Schedule 40 PVC well screen and riser pipe into each open auger hole. Sand was then added in order to place a filter pack around the well screen, until the level of the sand was approximately 300 mm above the top of the screen. In Borehole (BH) 1002, upper (-U) and lower (-L) monitoring wells were installed in separate stratigraphic units, with the shallower monitoring well (BH 1002-U) constructed using 19 mm PVC tubing with a fabricated 0.61 m screen and vented riser pipe to allow accurate water level measurement

A bentonite seal was then placed above the sand pack to prevent the infiltration of surface water. The top of the well riser pipes were vented to allow accurate measurement of stabilized groundwater levels, and protective steel casings with lockable covers were concreted in place to house each monitoring well.

All of the monitoring wells were constructed in accordance with Ontario Regulation 372/07 (formerly O. Reg. 903) as administered by the Ontario Ministry of the Environment (MOE). Well records were submitted to the MOE based on the cluster system whereby one well record can be submitted on behalf on an entire property. Provincial Site Cluster Tag Identification Number A085292 was placed on the monitoring well at BH 1003.

Water level measurements were taken on October 5 and 15, 2009, with measurements summarized in the appended Table 1.

Subsequent water level measurements at BH 1002 will shed light on the groundwater conditions in the peat deposits. Based on the measurements collected on October 5 and 15, it appears that the groundwater level at BH 1002 varies considerably in response to precipitation events; which is likely due to its location in a topographically low area.

Please note that ongoing monitoring of BH 1001 through 1003 will be required. It is presumed that Stantec Consulting Ltd. (the consultants who are managing the current monitoring program at the site) will add these three wells to their monitoring program.

I trust this summary is suitable for your present requirements. If you have any questions or comments, please feel free to contact our office.

Respectfully submitted,

lug 1/2

Chris Helmer, B.Sc. Groundwater Scientist

- Encl. Table 1 Groundwater Level Measurements Encl. Borehole Logs – Boreholes 1001 to 1003 Encl. Drawing 1 – Site Plan
- End. Drawing r one rian
- 1ec William J. Gies Construction Ltd., Mr. Bill Gies
- 1ec Townline Estates, Mr. Paul Puopolo
- 1ec Activa Group, Mr. Peter Armbruster
- 1ec IBI Group, Mr. Douglas Stewart

4489H9.L02

LVM-Naylor Division of Naylor Engineering Associates Ltd. Page 2

TABLE 1

MEASURED GROUNDWATER ELEVATIONS

Vista Hills Subdivision Wilmot Line Waterloo, Ontario

Well Name	Ground Surface Elevation (mASL)	Stickup (m)	Oct. 5/09 Depth to WL (mBTOP)	Oct. 5/09 WL Elevation (mASL)	Oct. 15/09 Depth to WL (mBTOP)	Oct. 15/09 WL Elevation (mASL)
BH 1001	372.76	0.61	5.77	367.60	5.28	368.09
BH 1002-U	371.74	0.86	dry	dry	1.35	371.25
BH 1002-L	371.74	0.80	4.16	368.38	1.26	371.28
BH 1003	372.30	0.70	5.01	367.99	4.20	368.80

Notes:

1. mBTOP - metres below top of pipe

2. mASL - metres above sea level

3. WL - water level

4489H9.L02

LVM NAYLOR

Location: Wilmot Line, Waterloo, Ontario

Borehole Number: 1001

Ground Elevation: 372.76 m

Job No.: 4489H9

Project: Additional Groundwater Monitoring Wells - Vista Hills Subdivision

Drill Date: September 29, 2009

SAMPLE SOIL PROFILE Dynamic Cone X Shear Strength (PP) kPa WP WI 50 100 150 200 X . 20 40 60 80 Water Content Groundwater Observations and Standpipe Details E (%) E Description Elevation N-Value standard Penetration Shear Strength (FV) kPa Symbol Number Depth (20 40 60 80 Type 50 100 150 200 1,0 2,0 3,0 372.76 Ground Elevation protective cover 0.00-AA. TOPSOIL: and concrete dark brown sandy silt, moist SAND: loose rusty brown fine sand. 372.00some silt, moist 1.00-SS 6 1 brown, damp 371.00-2 SS 7 6 2.00 loose brown silty fine sand, bentonite seal 5 0 3 SS damp 370.00-3.00 à 4 SS 6 369.00-4.00-October 15, 2009 SILT: water level at 4.67 m 368.00-15 -5 SS compact brown fine sandy silt, Elev. 368.09 m 5.00moist saturated 367.00-50 mm pipe 6.00 1.52 m slotted screen THILL SS 20 6 sand pack 366.00 TITITI TITITI 7.00-20 7 SS 8.00-Borehole terminated at 8.08 m Field Tech.: RM Reviewed by: CH Sheet: 1 of 1 Drill Method: Hollow Stem Auger Drafted by: SM Notes:

Borehole Number: 1002

Ground Elevation: 371.74 m

Project: Additional Groundwater Monitoring Wells - Vista Hills Subdivision

Location: Wilmot Line, Waterloo, Ontario

Job No.: 4489H9

Drill Date: September 29, 2009

SOIL PROFILE				SAMPLE Dynamic Cone St			Shear Strength (PP) kPa	WP WL		
Depth (m)	Description	Symbol	Elevation (m)	Number	Type	N-Value	X X X 20 40 60 80	50 100 150 200 Shear Strength (FV) kPa 50 100 150 200	Water Content (%)	Groundwater Observations and Standpipe Details
0.00	Ground Elevation		371.74							r
0.00	PEAT: black amorphous peat. APL	条条条条	371.00							and concrete
1.00	SILT:		=	1	SS	7	•			19 mm pipe
	firm brown to mottled brown clayey silt, APL very soft, WTPL									0.61 m slotted filter
1	Very son, WIFL		370.00	2	SS	2			6	sand pack
2.00		STATES AND								
-		11.022 11		3	SS	2			Ø	bentonite seal
3.00-	grey	A States	369.00							
3.00	PEAT: soft to very soft black amorphous peat, occasional	余余保		4	SS	2			78%	50 mm pipe 1.52 m slotted screen
1	shells, WTPL	**	368.00		Ц					sand pack
4.00	MARL: very soft marl, shells, numerous thin peat layers, WTPL		1111	5	SS	2			86% *	
5.00	PEAT: very soft black amorphous peat, some shells, WTPL	· 余余余	367.00	6	SS	2	-		87%	
6.00	Borehole terminated at 5.18 m		366.00							October 15, 2009 upper standpipe water level at 0.49 m Elev. 371.25 m lower standpipe water level at 0.46 m Elev. 371.28 m
7.00			365.00							
8.00			364.00							
0.00			1111							
Drill Method: Hollow Stem Auger Sheet						Field Tech. Sheet: 1 of Drafted by:	1			

LVM NAYLOR

LVM NAYLOR

Borehole Number: 1003

Ground Elevation: 372.30 m

Project: Additional Groundwater Monitoring Wells - Vista Hills Subdivision

Location: Wilmot Line, Waterloo, Ontario

Job No.: 4489H9 Drill Date: September 29, 2009

SOIL PROFILE SAMPLE Dynamiç Cone X Shear Strength (PP) kPa WP WL . 20 40 60 80 50 100 150 200 Water Content Groundwater Observations Elevation (m) (%) and Standpipe Details Ē Description Number N-Value Symbol near Strength (FV) kPa tandard Penetratio Depth (lype . . . 20 40 60 80 50 100 150 200 10 20 30 372.30 Ground Elevation protective cover 0.00-TOPSOIL: and concrete dark brown to black silt, moist SILT: 1.00 firm mottled brown clayey silt, SS 7 1 APL-DTPL 371.00bentonite seal stiff 2 SS 10 2.00-SILT AND SAND: 370.00 compact brown silt and sand 3 SS 23 layers, trace gravel, damp to moist 3.00 compact brown silt and sand. moist 369.00-October 15, 2009 4 SS 11 ó water level at 3.50 m very moist Elev. 368.8 m saturated 4.00-368.00 50 mm pipe 1,52 m slotted screen 5 SS 14 4 sand pack 目 5.00 367.00-E 6.00 366.00-6 SS 24 ė Borehole terminated at 6.55 m 7.00-365.00 8.00 364.00 Reviewed by: CH Field Tech.: RM Drill Method: Hollow Stem Auger Sheet: 1 of 1 Notes: MOE Well Tag No. A085292 Drafted by: SM

