TOWNSHIP OF MELANCTHON

A G E N D A

Thursday, April 15, 2010 - 6:00 p.m.

1. Call to Order

2. Additions/Deletions/Approval of Agenda

3. Disclosure of Pecuniary Interests

4. Approval of Draft Minutes - April 1, 2010

5. Business Arising from Minutes

6. Point of Privilege or Personal Privilege

7. Correspondence

1. GRCA Minutes - April 2010
2. Letter from NVCA regarding NVCA Land Acquisition through the Planning Process
3. Letter from the Ministry of Environment in response to Melancthon's letter to the Honourable Jim Bradley, Minister of Municipal Affairs and Housing regarding Wind Power Development
4. Amended Report to Council from Andrew Fyfe regarding the Draft Demolition Control By-law
5. 2008 Groundwater Compliance Monitoring Report for Strada Aggregates - Melancthon Pit
6. Letter from the Town of Orangeville clarifying any misinformation the Township may have received regarding payments to the Town by the Highland Railway Group

8. General Business

1. Vote By Mail By-law as Alternative Voting Method
2. By-law to Amend By-law No. 29-2009 (to appoint a Board of Management for the Horning's Mills Community Hall)
3. Emergency Preparedness Week Proclamation
4. Applications to Permit
5. New/Other Business
6. Unfinished Business
    1. Passage of 2010 Operating and Capital Budget - Tax Rate By-law

9. Road Business

1. Tenders for "A" Gravel

10. Delegations

1. 6:45 p.m. - Glen Porter regarding ROW and Notice to Close the Road
2. 8:00 p.m. - Garry Matthews - Closed Session - Personal Matters About an Identifiable Individual regarding NVCA Appointment

11. 7:00 - 7:30 p.m. - Public Question Period (Please visit our website under Agenda & Minutes for information on Public Question Period)

12. Closed Session (if required)

1. Solicitor/Client Privileged Information - Draft Biosolids By-law

13. Adjournment - Date of Next Meeting - Thursday, May 6, 2010 - 9:00 a.m.

14. On Sites

15. Correspondence on File at the Clerk's Office

1. Copy of a letter that the Township sent to Carl Cosack regarding his Delegation of March 4, 2010
2. Copy of a letter that the Township sent to NDACT regarding the Delegation of Carl Cosack on March 4, 2010

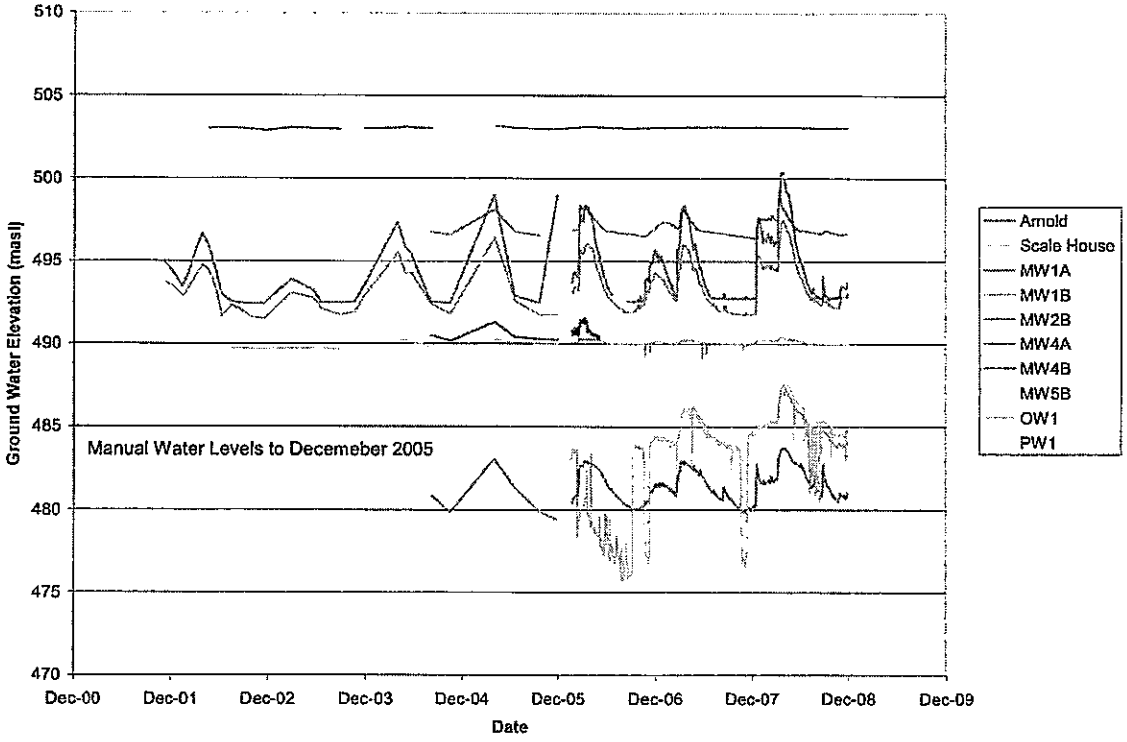


Figure 3: Ground Water Hydrograph

Table 3: Manual Water Level Measurements

MONITOR	Well Construction Details					Water Level Elevation (masl)				
	Ground Elevation (masl)	Stick Up (masl)	Top of Casing (masl)	Well Depth (m)	Bottom of Well Elevation (masl)	31-Jan-08	22-Apr-08	06-May-08	26-Aug-08	16-Dec-08
MW1-A	506.18	0.95	507.129	15	492.13	496.39	500.37	N/M	492.81	493.75
MW1-B	506.18	0.95	507.129	19.6	487.53	494.82	497.61	N/M	492.57	493.1
MW2-A	496.32	1.04	497.36	13.3	484.06	DRY	484.91	N/M	DRY	DRY
MW2-B	496.32	1.04	497.36	20.6	476.76	481.51	483.84	N/M	481.35	481.24
MW3-A	508.55	0.75	509.4	16.9	492.5	N/M	DRY	N/M	N/M	N/M
MW3-B	508.55	0.75	509.4	24	485.4	N/M	DRY	N/M	N/M	N/M
MW4-A	511.17	0.91	512.08	16.9	495.18	497.61	498.19	N/M	496.74	496.73
MW4-B	511.17	0.91	512.08	22.7	489.38	489.52	489.51	N/M	489.52	DRY
MW5-A	510.35	1.13	511.48	21.6	489.88	DRY	490.91	N/M	DRY	N/M
MW5-B	510.35	1.13	511.48	31.3	480.18	488.82	490.61	N/M	488.42	N/M
MW6 / Scale house			511.65			490.17	490.41	N/M	490.01	490.06
MW7-A			507.37	8.38		NOT INSTALLED YET		499.13	499.14	499.13
MW7-B			507.37	18.65				494.94	490.57	490.99
Arnold	+/- 506.6	2	507.88	5.52	502.36	503.13	504.13	N/M	503.08	503.08
GW1	504.07	0.7	504.77	48.76	455.31	484.73	487.37	N/M	484.69	483.92
PW1	503.46	0.73	504.19	48.8	455.39	484.83	487.45	N/M	494.79	483.99

N/M - Not measured

The Arnold Well is constructed in the overburden materials at a depth of 3.5 mbgs. The water level data indicates that there is only 1 m of water in this well. The lack of response reported is likely due to the limited data required to be collected from this well. In 2008 only 4 readings were measured, and only one was reported in 2007 (April 24, 2007). The manual readings may not have captured the "flashiness" of the water level response, or the transmissive nature of the materials at this location allows for the pressure response to dissipate instantaneously. The data does provide evidence that there has been no long-term trend in water levels in this well.

MW1-01A shows the greatest response to seasonal conditions (> 7 m rise in head during the spring melt), while MW1-01B fluctuates approximately 5 m annually. It is anticipated, that this response is merely the vertical conductance through an aquitard at this location (i.e., residual capillary waters). The head differential indicates that these monitoring zones are hydraulically isolated from one another. Furthermore, the continuous water level data provides data to indicate that MW1-01A goes dry during periods of the year (<492.1 masl). The water level response measured at this well may represent the ground water recharging the bedrock system during the spring melt. Lateral ground water flow in the overburden is considered to be discontinuous across the site due to the variability in the stratigraphy. As discussed below, the water levels reported within MW1-01A are believed to represent a perched system and is simply the infiltrating waters as they pass through the silty materials that make up the Tavistock Till

MW2-04A, was to be constructed at the overburden / bedrock contact. However, due to well-cave during construction, the screen is actually 1.1 m above this contact. This well has been dry

since installation in 2004. It is unlikely that there is a saturated zone beneath the base of the well screen (484.1 masl) and the bedrock contact, and it can therefore be concluded that the overburden is unsaturated at this location (i.e., no perched or water table conditions). The water level in MW2-04B ranges between of 479.5 and 483 masl. The pressure response is similar to the response measured at MW1-04B and shows a "seasonal" response, indicating that the bedrock aquifer is semi-confined.

MW3-04A is located just north of MW2-04 and has been dry since installation. The contact between the overburden and the bedrock was encountered at a depth of 18 m (490.5 masl). The well screen is located between 492.5 and 494 masl. Therefore there is approximately 2.5 m of overburden material that is not monitored. It is unlikely that these sediments are saturated given the fact that the first saturated zone within the bedrock aquifer at this location is below 485.4 masl (MW3-04B). This is supported by the data collected at MW2-04B, which indicates the first saturated zone is the within the bedrock aquifer has a potentiometric head below 485.4 masl.

MW4-04 is the only multi-level monitor that is constructed to measure the water level in the overburden along the northern property boundary. Based on field measurements, it appears that the well screen is located approximately 1.5 m from the overburden / bedrock contact. Water levels are reported to range between 498.3 and 496.8 masl. Unlike MW1-01A, the overburden at this location remains saturated throughout the year and the magnitude of the seasonal response (i.e., spring time highs) is minor (1.5 m versus 6 m). The perched conditions reported in MW4-04A supports the interpretation that there is limited lateral ground water flow across the site due to the variability in the sediments, specifically the till unit.

The continuous water level data collected from MW4-04B in 2006 indicated that the well is dry during the majority of the year, with water accumulating in the well during the spring freshet. Manual data collected during 2008 indicated that the water level was just above (<0.1 m) the bottom of the screen for much of the year. Continuous water levels were not collected in 2008 from this well due to the dry conditions. Therefore, the upper bedrock system at this location is unsaturated during the majority of the year. However, the well screen may be straddling a competent portion of the bedrock and not a conductive fracture plane.

MW5-04A is constructed 3 m above the base of the sand and gravel aquifer (well screen is between 490.0 and 502.0 masl). Based on the information provided on the water well record, the well was to be constructed at the base of the sand and gravel unit. However, it is anticipated that the well collapsed during well construction, backfilling the borehole prior to the installation of the well screen, raising the base of the well by 3 m. This well has been dry since construction.

In order to ensure the overburden is effectively monitoring in this area, replacement well (MW7-07) was constructed a short distance west of MW05-04 (Figure 2). Due to the proximity of MW5-04 to the existing pit face, and the site berm, MW7-07 was drilled to the east, between MW2-04 and MW5-04. Although the intent of this was to replace MW5-04, the stratigraphy encountered at MW7-07 was considerably different than that at either MW5-04 or MW3-04 (Appendix B). At MW7-07, the Tavistock Till is reported to be approximately 10 m in thickness, compared to MW2-04 and MW5-04, which have a reported thickness of 3 m and non-existent, respectively. This drastic difference in the local geology is an example of the complex stratigraphy beneath the Shelburne property.

Regardless of this difference, MW7-07A is screened within the overlying sand and gravel unit. The data collected from MW7-07A would indicate there is no perched groundwater in the shallow sand and gravel unit in that area. Given the limited data set for these new wells, it is proposed that pressure transducers be installed such that the ground water presence and potential trending can be more thoroughly assessed in 2009. However, if ground water is still not present at MW7-07A during the spring months, continued monitoring of this well is not recommended.

MW7-07B represents the replacement well, and is screened at immediately atop the bedrock contact. The limited dataset (two measurements in 2008) does not allow for an evaluation of the ground water levels at this location. The presence of ground water in the till unit is consistent with the other on-site wells.

As the presence of ground water in the overburden is not laterally continuous at the site, the ground water monitored in MW1-01A and MW4-04A is considered to represent "perched" conditions. Perched ground water is anticipated across the study area as a result the stratigraphic nature of the deposits. Locally and intermittently, there are indications of a perched (shallow) ground water flow system through the permeable sand found above the Tavistock Till and as anticipated, within the till unit itself.

Under the Revision of Policies and Procedures Manual for the Administration of the Aggregate Resources Act (May 2005) a perched ground water table is considered a local zone of saturation above the water table where a relatively impervious stratum within the zone of aeration interrupts/intercepts percolation and causes ground water to accumulate in a limited area. A perched ground water table is not usually considered the water table for the purpose of establishing the on-site ground water conditions.

Therefore the true potentiometric surface beneath the site is considered to be within the confined bedrock aquifer. The "open-hole" water level within the bedrock is measured at MW6 (Scale House Well), PW1 and OW1. In heterogeneous fractured rock aquifers, the water level in the open hole is a composite hydraulic head that represents a weighted average of hydraulic heads

based upon the transmissivity of different bedding plane fractures. This composite head is typically dominated by the most permeable fracture intersecting the bedrock well. Therefore, since the Melancthon Pit open hole bedrock wells are constructed to approximately 48 m (depth [MW6 is unknown]), it is anticipated that the most transmissive zones are at depth, where water was found at a least 38 mbgl. The water level in MW6 is relatively constant at 490 masl. Slight increases are evident during the spring freshet.

Figure 3 also presents the continuous water level data collected from PW1 and OW1. The static water level conditions indicate that water levels range between 484 and 487 masl. The 2 m increase observed in the spring as well as the decreasing trend over the summer period was reported in both wells. Similar to 2007, increased pumping of PW-1 during July and August created a drawdown of up to 3.5 m in both OW-1 and PW-1, however it should be noted that the drawdown was not as significant as 2006, which is likely attributable to a reduction in water taking volumes in 2008. It should be noted that this drawdown response was not reported in any of the other bedrock monitoring wells. This data indicates that the pumping from PW1 is having no measurable impact on the shallow ground water flow regime at or near the bedrock contact. However, the construction of the open-hole wells (PW1 and OW1) may be influencing the shallow ground water flow regime at or near the bedrock contact. If the deeper bedrock flow system intersected at PW1 and OW1 has a lower hydraulic head and controls the water level in the wells, the upper fracture planes may be draining to the lower system through this direct "pathway". That is, open-hole wells can create a continuous depressurization of the bedrock fractures in proximity to the well. This should not be considered an impact associated with the pumping of this well, but merely an influence of well construction.

3.2.2 Ground Water Flow Patterns

As discussed above, the potentiometric surface beneath the site is considered to be within the confined bedrock aquifer. The Provincial Standards states that for unconsolidated surficial deposits, the ground water table is the surface of an unconfined water-bearing zone at which the fluid pressure is atmospheric. In the absence of ground water in an unconfined aquifer, the Provincial Standards adopts the potentiometric surface as the ground water table.

The direction of ground water flow in the bedrock aquifer was based on the manual measurements taken in April 2008. Based on the elevation data collected from the site bedrock wells, the ground water flows from the highs reported in the west and north at MW1 and MW4 (500.4 and 489.5 masl, respectively) toward the southeast, where water levels decrease to 483.8 masl at MW2.

3.2.3 Ground Water Quality Monitoring

Ground water sampling took place on April 22, 2008. The ground water monitoring wells, which were sampled included: MW1-01A and B, MW2-04B, MW4-04B, MW5-04B, MW6, Arnold and Garner Well. It should be noted that several of the monitors had insufficient water to collect a sample during the April sampling period.

During sampling in 2008, water level measurements were obtained by field staff prior to any disturbance of the piezometric surface within each monitor. Ground water samples collected from dedicated monitoring wells were then collected following purging of at least three borehole volumes of water from each monitoring well (or until well pumped dry) using dedicated check valve pumps and tubing. Ground water samples for inorganic analysis were also filtered using disposable 0.45 μm filters (where permissible).

AGAT Labor Laboratories (Mississauga) conducted the analytical work in 2008. The laboratories provided all sample bottles, which were prepared with preservatives for consistency, as required. Samples were maintained in coolers with freezer packs and were delivered to the required laboratory within 24 to 36 hours of collection. A summary of the 2008 analytical data is included in Appendix D. It should be noted that sample I.D. "4A" from the laboratory report represents water quality from 4B as the bottles submitted to the laboratory were noted to be mislabeled.

The ground water geochemistry at the site is characterized by relatively low concentrations for most parameters. This is illustrated by the fact many inorganic parameters have a concentration that is below laboratory detection limits. The 2008 data was compared to both historical site data as well as to the Ontario Drinking Water Quality Standards (ODWQS). The results indicate that 2008 results correlate well with the historical data with only minor and justified exceptions.

The only water quality parameter that exceeded in 2008 was chloride at the Arnold well (314 mg/L). Chloride concentrations at this location have shown to be somewhat variable for the period of record, but the 2008 result represents a concentration much larger than typically observed. Given the shallow depth of the well, the elevated chloride may represent road salt impacts possibly enhanced by the above average snow melt experienced in the spring of 2008.

In addition to the inorganic sampling discussed above, several petroleum hydrocarbon parameters were analyzed. Petroleum hydrocarbons are evaluated because of the use of this product at this site and the presence of a fuel storage vessel. In 2008 there were only two trace detections for toluene at MW2-01B (0.27 μg/L) and the Arnold well (0.21 μg/L). As these detections were only slightly above detection limits and there were no other associated detections, these detections are likely anomalous. However, close attention should be paid to the

results obtained during the spring 2009 sampling event to confirm that the 2008 detections were indeed anomalous.

3.2.4 Graphical Analysis

Major ion chemistry was useful to identify some of the more important sources of water to the ground water flow regimes. Piper Diagrams (Piper, 1944) were used for the chemical analyses of the ground water, which are normalized (Figure 4). The ratio of the major ion chemistry from a water source tends to remain unchanged, unless influenced by an external factor. This ratio, or "hydrogeochemical signature", allows an evaluation of different water sources. These diagrams can be used to show the effects of various factors, including major and minor ion composition, of possible source waters, as well as, the effects of aquifer mixing.

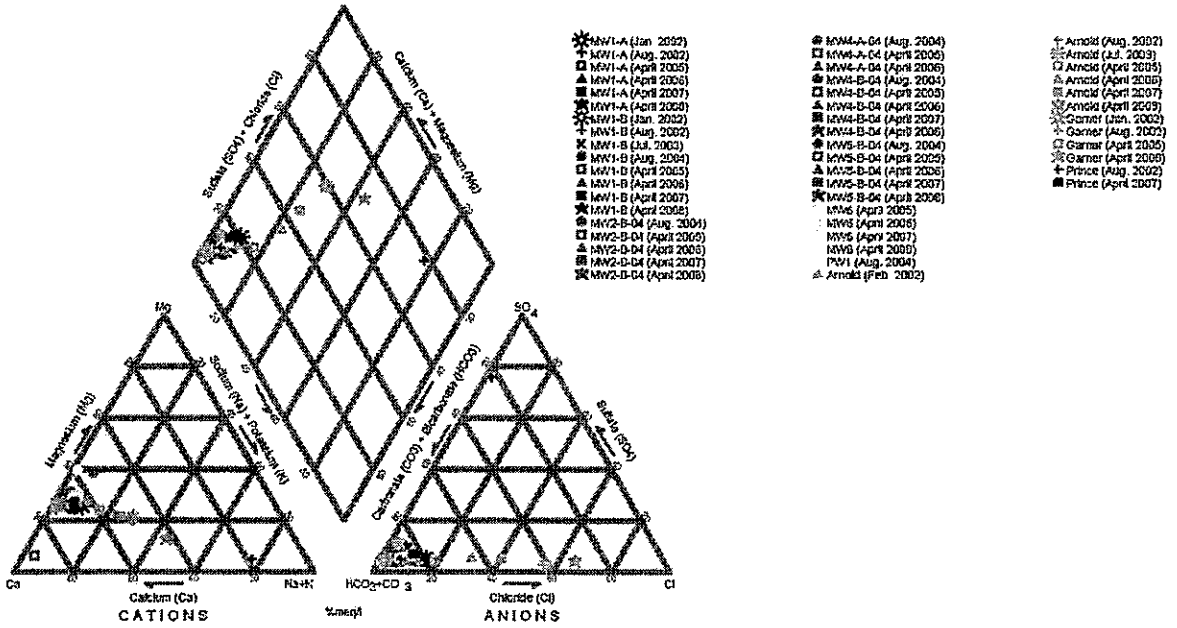


Figure 4: Piper Diagram

As can be observed in Figure 4, ground waters from the monitoring locations plot as a distinct signature $CaCO_3$-dominated signature. It was also found that some locations appeared to switch between signatures. This was most evident at the domestic wells (Garner and Arnold), which shows an increase in chloride. Water quality results indicate that there has been a long-term increasing trend in the concentration of chloride at the Arnold Well. The chloride concentration in 2002 was first reported as 18.3 mg/L and has consistently increased to 314 mg/L in 2008. A similar trend is observed for sodium. The shift in water quality over time is an influence of road salting.

4.0 Summary and Conclusions

Operation of the Melancthon Pit site is currently not having any measurable impacts on the surrounding environment.

It is recommended that the current monitoring program continue for 2009. Although all on-site monitoring wells with water are equipped with a datalogger, monthly water levels are still required in all other on-site wells to confirm the hydrogeological conditions and to comply with the PTTW.

2008 Ground Water
Compliance Monitoring Report
Melancthon Pit

Township of Melancthon
Dufferin County

Prepared for:
Strada Aggregates Inc.

Prepared by:
Azimuth Environmental
Consulting, Inc.

February 2009

AEC 09-029

5

APR 15 2010

March 2, 2009 AEC 09-029

Strada Aggregates Inc.
36 Briar Road
Barrie, Ontario
L5N 5H3

Attention: Mr. Tom Newson
Manager, Sand and Gravel Division

Re: 2008 Ground Water Compliance Monitoring Report

Dear Sir:

Azimuth Environmental Consulting, Inc. (Azimuth) is pleased to submit the annual ground water monitoring report for Melancthon Pit. The ground water monitoring data obtained during 2008 indicates, as in previous years, that the operations have no adverse impacts on the surrounding environment.

Yours truly,
AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Colin Ross, B.Sc.
Hydrogeologist

Tecia White, M.Sc., P.Geo.
Senior Hydrogeologist

cmr

Cc: James Williams (Aggregate Technical Specialist: MNR Guelph)
Bill Bardswick (Director: MOE West Central Region)

TABLE OF CONTENTS

LIST OF FIGURES

APPENDICES

1.0 Introduction

Strada Aggregates Inc. (Strada) owns and operates the Melancthon Pit, which is located on Lot 13, Concession 3, Township of Melancthon, Dufferin County (Figure 1). In March 2004, the Ministry of Natural Resources (MNR) issued an Aggregate Resource Act (ARA) License for the 40.7 ha property, which allows for the extraction of aggregate above the water table.

Strada obtained a Permit to Take Water (PTTW) under the Ontario Water Resource Act (OWRA) for the Melancthon Pit in February 2006, which was amended in November 2007 (PTTW No. 0580-78PPS2). The PTTW is to allow for the on-site washing of aggregate from a dug pond and a pumping well. The washing of aggregate began in the spring of 2006 and continued in 2007, however no washing was conducted in 2008 and water taking was limited to maintenance of pond levels and dust control. In accordance with O.Reg. 387/04 (Water Taking and Transfer Regulation), the PTTW requires that a ground water monitoring program be completed. This ground water monitoring program was incorporated into the Operations Plan to ensure that Strada remained in compliance with both the MNR and the MOE.

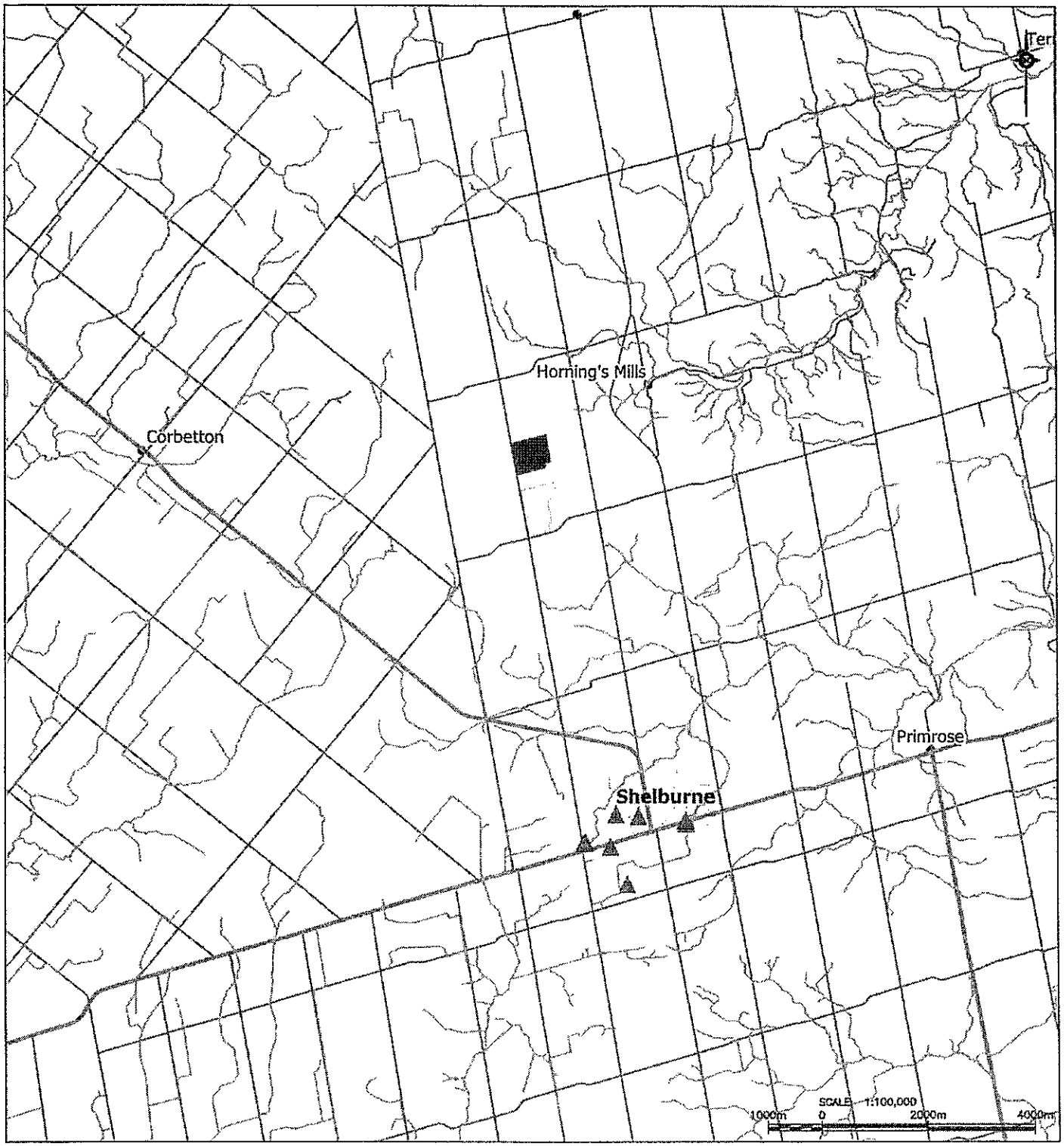
The ground water monitoring commenced in 2002 to collect background hydrogeological data to support the ARA application for a Class A pit above water. Goffco Limited was retained by Strada to complete the hydrogeological assessment and remained as the lead hydrogeological consultant (in collaboration with Long Environmental [Long]) until the end of 2007. At this time, Mr. Ken Goff of Goffco Limited has retired and has concluded his business operations. Since that time, Azimuth Environmental Consulting, Inc. (Azimuth) has since been retained by Strada to prepare the subsequent annual monitoring reports. The 2008 monitoring data presented in this report was collected by Long.

1.1 Objectives

The ground water monitoring program for the Melancthon Pit has evolved with the on-going development of the aggregate operation. This program is intended to effectively assess the impacts associated with two components of the aggregate operation (extraction and washing of aggregate). The Operations Plan states that the maximum expected depth of excavation elevation is to an elevation of 488.55 masl or to within 1.5 m of the seasonal high water table or within 1 m of the bedrock surface where no water is encountered. Therefore, the monitoring program must establish the water table conditions beneath the site.

The objective of this report is to summarize the results of the 2008 compliance monitoring program and to determine if the aggregate operation is causing any adverse impacts to the ground water regime.

A copy of the PTTW No: 0580-78PPS2 is provided in Appendix A. A summary of the ground water monitoring program is provided in Section 3.



LEGEND:

- SHELBURNE PIT
- SHELBURNE MUNICIPAL WELLS
- PROPOSED MELANCTHON PIT

DAYSTAMP: O:\07-253 Strada Aggregates\07-253b (Shelburne Pit)\Drafting - Shelburne\dwg\07-253b Shelburne.dwg 11/06/2008 08:06:46 EDT

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

REGIONAL LOCATION MAP

STRADA AGGREGATES

DATE ISSUED:	JUNE 2008	Figure No.
CREATED BY:	PHD	1
PROJECT NO.:	07-253	
REFERENCE:	NVCA	

1.2 Permitted Water Use

Under PTTW No. 0580-78PPS2, the following takings were permitted:

1. PW1 – 227 L/min (50 IGPM) for 12 hours per day, 250 days per year; and
2. Wash Pond – 11,365 L/min (2,500 IGPM) for 10 hours per day, 250 days per year.

The abovementioned PTTW allows for ground water from PW1 to be used for on-site concrete batching, in additional to the well's original intent, which was to provide make-up water to the wash pond. Standard washing operations pump from the wash pond to the wash plant. The maximum water demand for the wash plant is 11,365 L/min (2,500 IGPM). However, water used in the washing process is returned to a settling pond. Once the particles have settled out of the water in the settling pond, the water would be pumped back to the wash pond. The water would then be re-circulated back to the wash plant. Therefore, water losses are limited to evaporation and the amount of water retained in the aggregate product.

A summary of the 2008 water takings is provided in Section 3.1.

2.0 Physical Setting

The subject property resides within the physiographic region referred to as the Horseshoe Moraine (Chapman and Putnam, 1984). From Singhampton south to Caledon Village, the moraines lie along the brow and slopes of the Niagara Escarpment. Associated with these moraines is a system of spillways (further east) with broad gravel and sand terraces extending westward. The Melancthon Pit extracts the sand and gravels presumably from the western extent of this gravel and sand terrace system.

2.1 Surface Water Drainage

The Melancthon Pit is located in proximity to the drainage divide between two of two headwaters systems of the Nottawasaga River (the Pine River and the Boyne River). These rivers rise west of the Niagara Escarpment and flow in an easterly direction. The main branch system rises south of Shelburne and flows through the Hockley Valley. The Nottawasaga River flows into Georgian Bay where its mouth forms the delta of Wasaga Beach.

The native land surface is sloped in the vicinity of the site with a maximum elevation of 514 metres above mean sea level (masl) in the northeast corner of the site and a minimum of approximately 508 masl in the southeast. However, the hummocky surface associated with the moraine results in numerous closed depressions. These depressions, coupled with the high permeability of the overburden materials, will limit run-off and promote ground water recharge. Surface water runoff that does occur will generally drain in a southward direction toward the headwaters of the Boyne River.

Immediately east of the site, the land surface drops by about 10 m. This topographic relief continues to the east down into Horner Mills. West of the site, catchments are evident and hold water at about 500 masl. This may account for the persistent flow seen in the northwest corner of the site, although it could also be ground water derived.

2.2 Geology and Hydrogeology

The overburden in the study area lies at the western edge of the Horseshoe Moraine (Gwyn, 1972). The quaternary materials consist of pockets of glaciofluvial ice contact and outwash deposits as well as glaciolacustrine deposits that are incised into the underlying fine grained till. The ice-contact drift materials are described as mainly medium-grained sand with some gravel, pebbly sand and bouldery sand (Gwyn, 1972). Gwyn (1972) also regionally describes the presence of up to three till units consisting of one surficial unit that is eroded / overlain in areas where fluvial processes have advanced (i.e., study area). The other two till units underlie the surficial unit and are separated by up to 0.6 m of silt and sands and are absent in some locations.

To assist Azimuth in the review process, Goffco has prepared borehole logs, which provides a detailed description of the well construction details relative to the geological formations beneath the site (Appendix B). Based on the results of the on-site drilling, the thickness of the overburden deposits range between 13 and 25 m. The unconsolidated sand and gravel resource ranges between 5.5 and 23 m in thickness and is underlain by a clay till deposit. This till unit may represent the regionally extensive Tavistock Till sheet, which is found at the surface to the south in the Town of Shelburne or one of the other two till units described by Gwyn (1972).

The Town of Shelburne Groundwater Management Study identified a sand and gravel layer, which exists just above the bedrock and is essentially [continuous] with the upper portion of the bedrock (Burnside, 2001). This sand and gravel layer along the bedrock contact was not identified beneath the Melancthon Pit.

However, it is likely that the upper bedrock rock surface beneath the Melancthon Pit has experienced some degree of alteration during glaciation (stress relief and weathering). This unconformable contact may have become highly fractured.

Two principal aquifers were identified in the Town of Shelburne Groundwater Management Study (Burnside, 2001) being the overburden aquifer and the contact zone aquifer. The contact zone includes the upper fractured bedrock. Production wells in the Town of Shelburne utilize the contact zone aquifer (i.e., bedrock aquifer). Based on the data collected from the Melancthon Pit, there is ground water within the overburden deposits. However, as discussed in Section 3, it is believed that this ground water is "perched" and laterally discontinuous within the unconsolidated materials.

3.0 2008 Ground Water Monitoring Program

The 2008 ground water monitoring program was carried out under the exisiting Operations Plan, as well as PTTW No.: 0580-78PPS2, which replaced PTTW No.: 8277-6HYN9S in November 2007. This new permit was granted to Strada Aggregates Inc. to the permit water taking from PW1 to be used for concrete batching. The 2008 ground water monitoring program is summarized in Table 1. The monitoring locations are provided on Figure 2.

Table 1: Ground Water Monitoring Program

2008 Compliance Monitoring Program		
Condition No.	**Details**	**Frequency**
PTTW No.: 0580-78PPS2		
4.2	Monitor ground water levels in PW1 and OW1 when PW1 is in use	Twice per day
4.3	Manual water level readings in all on-site monitoring wells	Monthly
Operations Plan		
G3/G4	Ground water levels of all on-site monitoring wells and local domestic water wells (i.e., Nelson/Arnold, Banks, Garner)	Quarterly
	Ground water quality sampling (general chemistry, TPHs, and VOCs)	Annually

Note:

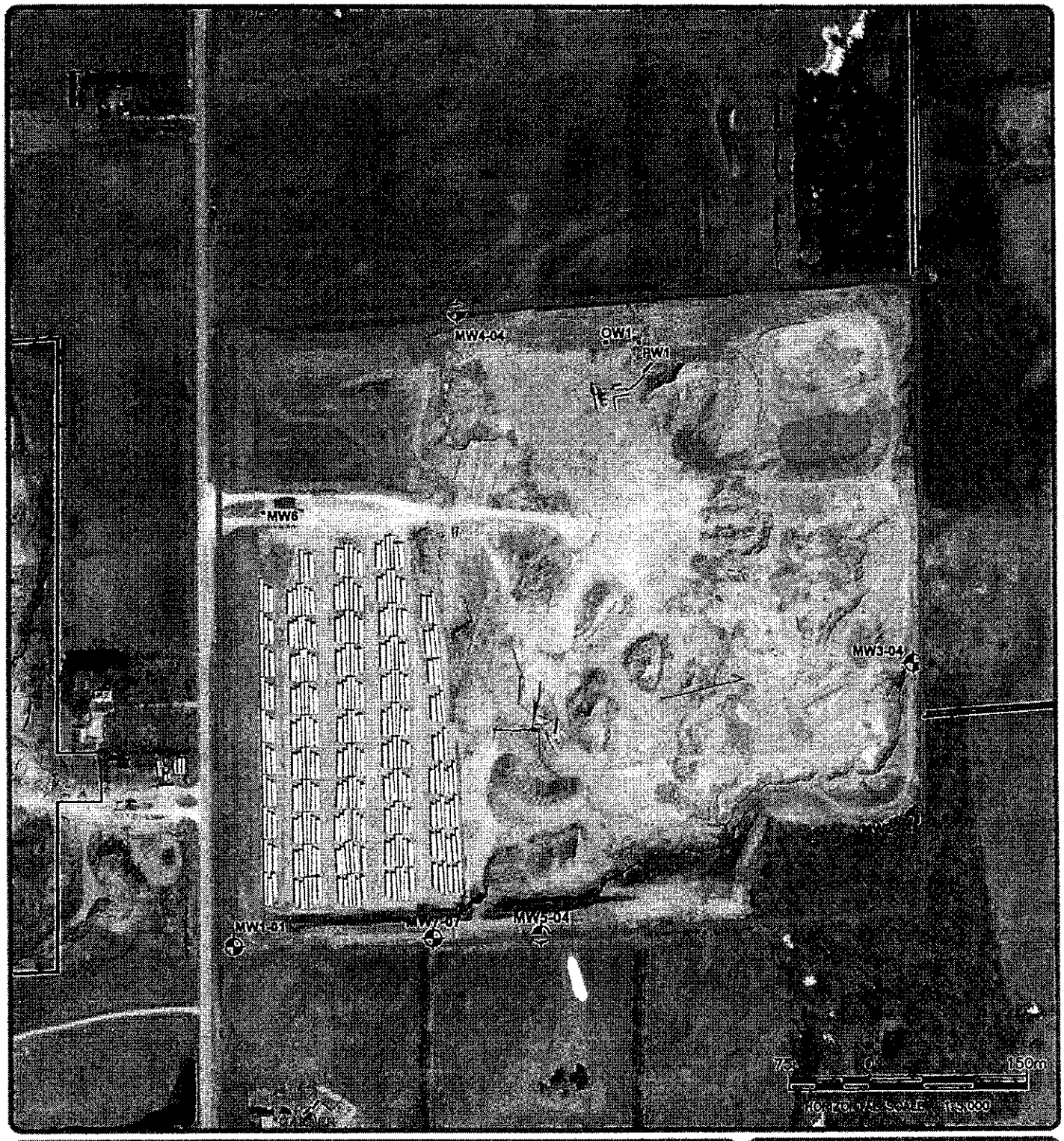
1. The Garner well is inaccessible and therefore no water levels are collected from this location.
2. The Banks well is referred to as MW6 throughout the remainder of the report.

To provide a more comprehensive database, ground water monitoring wells that intersect the ground water table were instrumented with automatic dataloggers in February 2006. The dataloggers have been collecting daily water levels since the installation date. It should be noted that this monitoring frequency exceeds the PTTW requirements.

3.1 Reported Water Takings for 2008

The reported water takings from PW1 for the purpose of maintaining the water level in the wash pond is provided in Appendix C. The water level in the wash pond was maintained for the operating season. However, no washing occurred in 2008. Water from the pond was used strictly for dust control.

Water taking from PW-1 took place in 2008 between April 21 and December 16. Water taking records, which have been provided in Appendix C have indicated that water taking amounts did not exceed the daily limit of 164,000 L on any day during 2008.



LEGEND:

- On Site Monitoring Wells (Multi Level)
- Open Hole Monitoring Wells
- Off Site Monitoring Wells
- Shelburne Pit Property Boundary

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Site Location Map

Shelburne Pit

DATE ISSUED: March 2009	Figure No. 2
CREATED BY: JLM	
PROJECT NO.: 09-029	

DAYSTAMP: L:\07 Projects\07-253 Strada Aggregates\07-253a (Existing Shelburne Pit)\09-02908 Shelburne Pit Compliance Report\[illegible]\Monitoring Report\1Baug08.dwg

3.2 Water Level Monitoring Network

The water level monitoring network remained similar to that monitored in 2007 with required measurement of all monitoring wells as well as neighbouring domestic wells. The compliance water level monitoring consists of obtaining measurements in the on-site monitors, as well as two off-site domestic water wells (Arnold and Garner). Monitoring of the Garner Well is no longer possible, as the well is inaccessible. Water levels were collected automatically on a daily basis in all observation wells, with the exception of the Arnold Well, PW1 and OW1. Water levels in the Arnold Well are collected quarterly, while water levels in PW1 and OW1 are collected continuously at a one-hour interval. This water level database far exceeds the requirements under the Operations Plan and PTTW. It should be noted that in any instance there is no datalogger data for a location, the monitoring well is dry, therefore no manual data was reported.

The intent of the increased measurement frequency is to allow for greater detail in water level data such that short-term water table fluctuations (e.g., response to rainfall events), and to measure drawdown/recovery responses in PW1 and OW1.

3.2.1 Ground Water Elevations

Figure 2 illustrates the location of all monitoring locations, both on and off the site. Borehole logs are provided in Appendix B.

The monitoring wells across the site have been instrumented as multi-level piezometers (overburden and bedrock monitoring wells), which are identified as monitoring A and B, respectively. A multi-level monitoring network provides the data to assess the similarities and contrasts in the hydraulic head of each monitored zone, which provides knowledge on the uniqueness of the aquifer system(s) present. The hydraulic response also can provide evidence on the interconnectivity of the aquifer systems through the comparison of seasonal trend data. The interpretation of the hydraulic head is the most effective means to infer vertical interconnectivity, or lack there of (Novakowski, 2007). In this regard, the vertical hydraulic gradients measured at the nested well locations have been evaluated.

In 2008, the water table elevations in the vicinity of the Melancthon Pit have remained relatively stable over the monitoring period. MW1-01 monitors the silty overburden (monitor A) and the bedrock (monitor B). The water level data is presented on Figure 3 and the manual readings are provided on Table 3. As anticipated, a seasonal trend is observed in all monitoring wells that are not reported as dry, excluding the Arnold Well.

Orangeville
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April 8, 2010

Ms. Denise Holmes
CAO/Clerk-Treasurer
Township of Melancthon
157101 Highway 10
R.R. #16
Shelburne, ON
L0N 1S9

Dear Ms. Holmes:

Re: Payments to the Town of Orangeville by The Highland Railway Group (HRG)

I am writing to clarify any misinformation you may have regarding the above-noted matter. To date, the Town has been very forthcoming with information requests relating to this matter, especially the requests by Ms. Karen Wallace. The information requested related to payments by the HRG of the Town's legal costs associated with (a) the agreement to sell the Orangeville Brampton Railway, and (b) determination of the voting rights of the Town's representatives at Dufferin County Council.

Please be advised that:

(a) The HRG is paying a number of the Town's legal costs associated with the 2008 railway/purchase agreement, in accordance with the terms of that agreement; however
(b) The HRG has not paid, or compensated the Town in any way, for the legal costs incurred by the Town, in the matter of the alleged conflict of interest/voting rights at Dufferin County Council.

I trust that this information is found to be helpful by you and the Township of Melancthon's Council.

Yours truly,

R.K. Schwarzer
Chief Administrative Officer

c: Mr. John Ritchie, Ritchie Ketcheson Hart & Biggart, LLP
Mr. Neil Davis, Davis Webb LLP
Mr. Bill McKennan, Treasurer

(6)

APR 15 2010