



Council in Committee Report
November 3, 2009

SITE ALTERATION PERMIT – 5511 BLOOMINGTON ROAD (E07)

Report prepared by: Manager of Engineering Services

RECOMMENDATION:

The Director of Engineering and Capital Projects recommends:

- 1) **THAT the agreement to facilitate the issuance of a Site Alteration Permit to 1757196 Ontario Limited for the dumping of clean fill on their property in part lot 9 Concession 4, 5511 Bloomington Road for Phase 1 area, be approved subject to any revisions that may be required by the Town Solicitor;**
- 2) **AND THAT the applicant submit an enhanced groundwater monitoring report that includes the installation of monitoring wells on the perimeter of the site to the satisfaction of the Town and the Region of York;**
- 3) **AND THAT Council approve an exception to site alteration By-Law No. 2008-016-RE to permit the issuance of a permit on lands zoned rural extraction;**
- 4) **AND THAT the Mayor and Clerk be authorized to sign the agreement between 1757196 Ontario Limited for Phase 1 and the Town of Whitchurch-Stouffville for the site alteration permit for 5511 Bloomington Road;**
- 5) **AND THAT the application for a site alteration permit from 5783 Bloomington Road is received and reviewed in conjunction with Phase 2 areas for 5511 Bloomington Road.**

1. PURPOSE:

The purpose of this report is to seek Council approval for a site alteration permit for a property at 5511 Bloomington Road and the dumping of approximately 1.15 million cubic metres of clean fill on the site of the former gravel pit, to restore the site to the approximate original grade, and to seek Council's approval to execute an agreement that sets out the terms and conditions that would be required to allow a site alteration permit to be issued.

2. BACKGROUND:

On July 28, 2009 Council considered a staff report on a Site Alteration Permit for 5511 Bloomington Road. At the meeting, Council resolved:

1. That the application for a site alteration permit from 1757196 Ontario Limited be received, and that all public and agency comments be referred back to staff for a further report;
2. That the applicant submit an enhanced groundwater monitoring plan that includes the installation of monitoring wells on the perimeter of the site to the satisfaction of the Town and the Region of York;
3. That staff prepares an agreement between the Owner and the Town in accordance with Section 4.2 of By-law 2008-016-RE for Council's consideration that sets out the conditions that the owner would be required to comply with, if a permit is issued.

2.1 Location

The Engineering and Capital Projects Department received an application for a site alteration permit on February 5th, 2009 from 1757196 Ontario Inc. for a property in part of Lots 9 and 10 Concession 8 with the municipal address 5511 Bloomington Road. See Attachment 1 for the location of the site.

The property is a 24 hectare triangular shaped parcel of land with 700 metres of frontage onto the south side of Bloomington Road, just east of Highway 48, as shown on Attachment 1.

The property is a former gravel pit that was re-habilitated by the former owner in accordance with the Ministry of Natural Resources requirements under the *Aggregate Resources Act*. The rehabilitation included placing of topsoil and fill varying in depth up to 3.8 metres and grading the side slopes to approximately 3 to 1. On completion of the pit rehabilitation, the aggregate extraction license was returned to the Ministry.

The property is currently zoned rural extractive in accordance with General Zoning by-Law 87-37 as amended by By-law 92-112. Excavation of aggregate and rural uses is the only uses permitted on the lands.

2.2 Proposal

The owner proposes through the Town's site alteration permit process to place up to 1.15 million cubic metres of clean fill in the decommissioned pit over the entire site to raise the surface grades such that the finished grades slope to the south from Bloomington Road at a grade of 2% to 6%. A copy of the latest site grading plan/phasing plan is Attachment 2.

The fill will be capped with a minimum of 2'-0 foot of topsoil. The owner intends to use the lands for agricultural – rural uses. It is estimated that the clean fill operation will last for duration of approximately 3 years. Vehicular access to the site is proposed via an existing driveway onto Bloomington Road located at the north-western corner of the property.

The owner proposes to conduct the site alteration/fill operation in accordance with requirements of the Town's Site Alteration By-law 2008-016-RE. Their proposed operational protocol is outlined in their flow chart which is appended to this report as Attachment 3.

2.3 Supporting Documentation

In support of their application for a site alteration permit, the applicants have submitted the following documentation:

- 1) Topographical survey of the site prepared by Guido Papa Surveying Ltd.;
- 2) Revised site grading plan and detailed cross-sections prepared by Fabian Papa and Associates Inc. indicating the phasing of works;
- 3) Archaeological Assessment Report prepared by Ameck Consultants Limited, Archaeological Consultants;
- 4) Geotechnical Investigation and Soil Permeability Report, prepared by Shad & Associates Inc.;
- 5) Oak Ridges Moraine Conservation Plan Conformity Letter;
- 6) Operation Protocol Letter;
- 7) Water Well Monitoring Strategy; and
- 8) Dust Control Plan

2.4 Public Consultation

In accordance with the requirements of the Town's Site Alteration By-Law a notice was sent on July 2nd, 2009, to all properties within 120 metres of the site, the Region of York and the Toronto and Region Conservation Authority and the Notice was placed on the Town's website.

Council at their meeting on July 28, 2009 held a public meeting to give residents an opportunity to provide comments and ask questions on the proposal. Subsequent to the meeting, a letter dated September 3, 2009 was received from the owner of an adjacent property, who raised concerns about dust, water and noise that may occur as a result of the operation of the proposed filling.

The issue of dust and mud will be addressed through the implementation of a Dust Control Plan, prepared by 1757196 Ontario, acceptable to the Director of Engineering and Capital Works.

The type of noise originating from the site will be from the operation of the equipment grading the fill and the trucks entering and leaving the site. The most annoying noise will be from the intermittent banging of the tail gates when drivers unload the fill material. To address this issue, 1757196 Ontario Inc. will be erecting a large sign posted at the site entrance indicating that tail gate slamming is prohibited and that failure to comply will result in the driver being banned from the site permanently.

On October 2, 2009 staff met with the adjacent property owner and the owners and consultant for 1757196 Ontario to discuss filling a portion of the adjacent property in conjunction with the Phase 2 area of 5511 Bloomington Road.

The gravel pit on 1757198 Ontario's land extended into the property to the east leaving a similar depressed area. Filling 1757198 Ontario's land will only partially fill the abandoned pit. The current design includes installing 225 metres of 800mm diameter culvert to drain the low area on 5783 Bloomington Road and grading the side slopes to 3:1. The owner prefers that a portion of his property be filled at the same time to eliminate the portion of the pit on his property.

The results of this meeting are as follows:

- 1) The owner of the adjacent property will submit a permit application to fill his low area at the northeast corner of his property. This area is the extension of the former gravel pit. He must submit the required reports and drawings for the Town and other agencies approvals. This approval for site alteration may take approximately 8 months and will involve holding a public meeting. The final approval of the grading plan for this site alteration will address any drainage issues or ponding water which may occur, if the adjacent property owner will arrange with 1757196 Ontario to fill his land as an extension to their operation utilizing the entrance and control gates.

3. ANALYSIS & OPTIONS:

Town staff and the Town's Peer Review Consultant, Gartner Lee Limited, have reviewed the plans and reports, and are in agreement with the conclusions and recommendations submitted by Fabian Papa and Partners Inc..

The site alteration for 5511 Bloomington Road is broken down into three phases as follows:

Phase 1

The phase 1 area includes the removal of the existing pond on the south side of the property, half of the property to be filled and the reforestation area of 5.7 hectares required by the Region. The area to be filled is approximately 12 hectares.

Phase 2

The phase 2 area consists of the low area created by an old abandoned gravel pit adjacent to Bloomington Road. The area to be filled is approximately 9 hectares.

Phase 3

The phase 3 area includes a small area (3 hectares) at the northwest corner of the property where the entrance and gates will be located.

Refer to attachment 2 for the phasing plan proposed for the site alteration of 5511 Bloomington Road.

The placing or dumping of fill in the Town of Whitchurch-Stouffville is regulated by the Town's Site Alteration By-law 2008-016-RE. The By-law requires persons wishing to dump fill to first make an application to the Town and provide the information set out in the by-law. Prior to issuance of a permit, the applicant must enter into an agreement with the Town and submit any required securities and insurance certificates. The agreement requires the owner to retain a qualified engineer to oversee the site alteration and to ensure compliance with the environmental control program, which includes operation standards, fill screening procedures, and a groundwater monitoring program that includes a minimum of three on-site monitoring wells installed down gradient from the fill.

3.1 Rural Extractive Zoned Lands

Section 2(e), General Prohibitions of By-law 2008-016-RE, prohibits the dumping or placing of fill on lands zoned rural extractive in accordance with By-law 92-112. Since the subject lands are currently zoned rural-extractive, it will be necessary for Council to approve an exception to By-law 92-112 prior to a fill permit being issued.

3.2 Oak Ridges Moraine Conservation Plan Conformity

The site is located within the Natural Linkage Area of the Oak Ridges Moraine Conservation Plan (ORMC). The applicant has submitted an Oak Ridges Moraine Conservation Plan Conformity Letter that illustrates that the proposed site alteration permit application is in conformity to the specific requirements of the plan. Staff has reviewed the conformity letter. The restoration of the lands back to agricultural/rural use is consistent with the ORMC Plan objectives of

restore the natural ecological integrity of the plan. Of particular importance is sub-section 12(1) (d) and (e) of the ORMC Plan where it requires that the quality and quantity of surface water and groundwater shall be maintained. Based on the geotechnical investigation and soil permeability study submitted by the applicant, the site is underlain by clayey silt-till with low permeability. This coupled with the dumping of imported fill with similar characteristics will raise the surface grade providing some additional protection to the groundwater subject to only clean fill being placed.

The ORM Conservation Plan requires that all site alteration work include sediment and erosion control measure. The applicant has indicated protective measures on the site grading plans including siltation control fencing, seeded slopes and swales and ultimately agricultural vegetation.

3.3 Proposed Operation Protocol

The operational protocol is broken down into two parts, a protocol for the source site and a protocol for the fill site.

The protocol for the source selection is as follows:

- 1) Source site representative provide a full geotechnical report, chemical analysis and Phase 1 ESA for the source for review and approval by Town and Region
- 2) Owner's geotechnical consultant reviews the reports to determine, if the source is in accordance with MOE Table 2 standards.
- 3) If the reports meet the MOE table 2, then the geotechnical consultant will sample the source at the Region's minimum frequency. If a Phase 1 ESA is not available, then 50% of the material will be tested and the rest at the minimum frequency.
- 4) If the results meet MOE table 2 standards then all documentation is sent to the Region and Town for review and approval.
- 5) Once approved by Region and Town the source material is acceptable to haul to the site.

The protocol for the filling of site is as follows:

- 1) Owner's representative at the source shall maintain detail records for each truck indicating information of the Haulage Company, truck licence plate, and departure and return times. Haulage tickets shall be given by representative to the truck driver after truck has been filled. A digital ticket scanning system will be implemented whereby an organized numbering scheme is used to describe the above noted recorded information. The Town's consultant representative will periodically check the approved source site that this protocol is followed.

- 2) Truck leaves the source site and proceeds directly to the Bloomington site. Loaded trucks must not be left unattended or left on site overnight. A security gate immediately at the entrance will be open during operating hours and be set back from the road to allow space for the trucks to line up prior to 7:00am. Truck enters and is stopped at the permanent on-site trailer located approximately 250m from Bloomington Road. There will be another lockable gate at this location. All documentation (reports, chemical analyses, approval letters etc. shall be held within the trailer.
- 3) Site will be equipped with 24 hour video surveillance, particularly the trailer and driveway entrance.
- 4) Truck driver shall give ticket to owner's representative in the on-site trailer. The ticket will have a bar code which can be scanned and cannot be photocopied. The information from the scanned ticket is input into on site computer indicating the truck and source information. This information is verified by owner's representative. Representative shall then visually inspect the material within the truck to ensure no other unapproved material was added to the load (bricks, lumber, debris etc.).
- 5) Once the load and ticket is accepted, the gate is opened for the truck to enter and the truck is directed to filling area to dump load
- 6) Each approved source site will have their own designated dumping location. All loads dumped will be documented on a plan and these plans will be submitted to the Town for our records on a monthly basis.
- 7) The Town's consultant on a required basis at the owner's cost will periodically check if this protocol is followed at the fill site.
- 8) The Town's geotechnical consultant at the owner's expense shall conduct additional chemical analysis of two samples taken from each source site at their designated dumping location on a monthly basis to a standardized minimum list.
- 9) The Town's geotechnical consultant will provide a report of the results a week after the testing and if approved the filling operation will continue. If the soil results are not acceptable and the source site is operational, then the owner shall immediately halt the truck hauling operation from that particular source site. The owner shall remove the unacceptable material as directed by the Town's geotechnical consultant.
- 10) A summary report will be submitted to the Town and Region how the site is remediated for Town's and Region's records.

The operational protocol submitted by the applicant is in compliance with the Town's by-law.

The applicant proposes to conduct a potable well monitoring program to ensure that the filling operation will not adversely affect surrounding wells. The monitoring program will include installation of three (3) monitoring wells around the perimeter of the site. Staff will, in consultation with the Town's environmental peer review consultant, AECOM (Gartner Lee, Associates) require the applicant to submit a revised groundwater monitoring plan.

3.4 Regional Municipality of York

Staff and the applicant met with staff of the Water Resources Section of the Region's Environmental Promotion and Protection Branch. The subject lands have particular Regional interest given the close proximity to their Stouffville Production Wells 5 and 6, which draw groundwater from the shallow aquifer and are designated as GUDI wells, Groundwater Under the Direct Influence of surface water, under O.Reg 170/03. This designation heightens the risk to the wells. A small portion of the southeast portion of the subject property is located within 100 metres of Stouffville Well No. 5. The remaining portion of the subject property is located within the 2-year Wellhead Protection Area for Stouffville Wells No. 5 and 6. Under the *Clean Water Act, 2006*, activities on these lands require careful consideration and the need for a strong precautionary approach.

In general, York Region is supportive of this application as the proposed filling operation offers an opportunity to further rehabilitate and enhance the protection of the shallow aquifer. However, York Region remains very concerned regarding the impact of the filling operations on both the quality and quantity of the municipal drinking water supply.

The Region's terms and conditions included in the draft agreement include the following measures which take into account the sensitive nature of the subject lands given their close proximity to the Stouffville Production Wells 5 and 6:

- Enhance the proposed Operational Protocol by including the following additional controls:
For all project sources, regardless of volume, the following additional measures shall apply:
 - 1) Sampling locations from source sites must be representative of the entire source areas and be uniform as per Ont Reg 153/04
 - 2) Samples must be taken at depth and not contain surficial soil samples as per Ont Reg 153/04
 - 3) Copies of soil report(s), prepared by a qualified geotechnical consultant;
 - 4) A Phase 1 Environmental Site Assessment (ESA), according to CAN/CSA Z768-01 with reference to the modifications in Ont Reg 153/04, should be submitted if available for each source site;

- 5) In the event that a Phase 1 ESA is not available for a source site, 50% of soil samples collected will be analyzed for the full suite of parameters listed in MOE Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition;
- 6) All soil samples collected will be analyzed according to the standardized list and shall conform to MOE Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition;
- 7) Sampling locations from project sources must be chosen so as to ensure uniform and representative sample collection so as to represent the entire source area and must not be surficial soil samples;
- 8) Samples of soil from project sources must be collected at or above the applicable minimum frequency set out in Table 1;

Table 1: Minimum Project Source Sampling Frequency	
Project Source Volume of Soil	Chemical Analysis Samples
Less than 50 m ²	A minimum of 1 sample
50 m ³ to 150 m ³	A minimum of 3 samples
150 m ³ to 500 m ³	A minimum of 5 samples
500 m ³ to 1500 m ³	A minimum of 10 samples
> 1500 m ³	A minimum of 15 samples

- 9) On-site inspection by an authorized party shall be performed for each load received with sufficient documentation to approximately locate the final placement of the load should a future contamination issue arise;
- 10) Posting signs at the site to indicate that it is a sensitive 'wellhead protection' fill area, to discourage illegal fill dumping and address public concerns;
- 11) Documentation by a qualified professional certifying the source material as clean fill, soil chemical analysis reports and Phase 1 ESA (if available) should be submitted to York Region for approval prior to excavation and deposition on subject lands;
- 12) All fish located in the existing pond on-site be removed and relocated off-site in their entirety in accordance with the appropriate regulations and by-laws;
- 13) To discourage illegal fill dumping and address public concerns, signs shall be posted at the fill site to inform the public that it is a sensitive wellhead protection area and that illegal dumping are prohibited;
- 14) Records of incoming source material, in accordance with By-Law 2008-016-RE, shall provide sufficient documentation to locate the final placement of a load should a future contamination issue arise;

- The Groundwater Monitoring Program must have full approval by York Region in terms of design, construction and operation.
 - 1) Monitoring well network to be fully approved by York Region prior to construction, including well locations, size, type including well and screen depths;
 - 2) An initial scan of groundwater parameters listed in Table 2 (subject to revision) should be conducted for three on-site monitoring wells, to be submitted to York Region upon completion;
 - 3) All subsequent sampling events at three on-site monitoring wells should include those parameters listed in Table 2 (subject to revision), in addition to any contaminants outlined in the Phase 1 ESA which are not already outlined in Table 2, to be submitted to York region upon completion.

Table 2: Groundwater Sampling Parameters	
Parameter	Standard (ug/L)
pH (field parameter)	Field monitor
Conductivity (field parameter)	Field monitor
E. Coli	ND
Total Coliforms	ND
Alkalinity	30000-500000
Ammonia	monitor
Arsenic	25
Barium	1000
Benzene	5
Boron	5000
Cadmium	5
Calcium	monitor
Chemical Oxygen Demand	monitor
Chloride	250000
Chromium (Total)	50
Conductivity	monitor
Copper	23
1,4 Dichlorobenzene	1
Dichloromethane	50
Dissolved Organic Carbon	5000
Hardness as CaCO ₃	300000
Iron	0.3
Lead	10
Magnesium	monitor
Manganese	0.05
Mercury	0.12
Nitrate	10000
Nitrite	1000
pH	6.5-8.5
Phenol	4200
Sodium	200000
Sulphate	500000
Toluene	24
Total Dissolved Solids	500000
Total Kjeldahl Nitrogen	monitor
Total Phosphorus	monitor
Vinyl Chloride	1.3
Zinc	1100

- That the landowner enter into an Agreement with the Regional Municipality of York for the purposes of:
 - 1) Permitting the Region to prepare, reforest and monitor approximately 5.7 hectares, as a minimum, identified as Part A on Figure 1 (see attachment #4) for the purposes of restoring a forested community on site and providing a buffer area around our municipal wells;
 - 2) Committing the landowner to protect the lands identified as Part A in Figure 1 (attachment # 4) in such a manner that will not preclude the reestablishment of a forest community, and to permit access to these lands by the Region or their agents for the purposes of monitoring and tending the new forest as necessary with a schedule satisfactory to both parties.
- That fill placement within the area to be reforested include no less than 80 cm. of uncompacted topsoil when achieving the final grade of the lands and that these lands be stabilized with vegetation; the species used for vegetative stabilization are to be approved by the York Region staff prior to their application.

4. FINANCIAL IMPLICATIONS:

In accordance with the Site Alteration By-law and the Town's Fee By-law, in addition to the application fee, the applicant is responsible for paying all of the Town's engineering and environmental peer review costs. If the application is approved, the site alteration agreement would require the applicant to pay the Town's on-going inspection and the review costs of the on-going environmental monitoring reports. The applicant would be required to provide a letter of credit or cash as security to cover the cost of work undertaken by the Town including emergency repairs or mud and dust control.

In accordance with the Town's fee By-law, the applicant will also be required to pay the municipal servicing fee of \$0.20 per cubic metre of fill dumped. The applicant will be required to deposit securities in the form of a \$10,000 cash deposit and a \$90,000 Letter of Credit. There are no other financial implications.

5. ALIGNMENT WITH STRATEGIC PLAN:

This report is aligned with the Town's Strategic Plan in the following manner:

1. *Balanced Growth & Community Sustainability*
2. *Fiscal Stewardship & Asset Management*

6. CONCLUSION:

Although the site is a rehabilitated gravel pit, elimination of the 3 to 1 side slopes and providing more uniform finished grade and the placing of 12 to 18 inches of topsoil will result in the site being more suitable for agricultural purposes. With stringent controls on the quality of clean fill delivered to the site, the filling of the site will also offer an additional measure of protection to the shallow aquifer.

Staffs recommend the application proceed in phases and only the first phase commence at this time. Commencement of Phase 2 will not occur until the site alteration application for 5783 Bloomington Road is reviewed and approved, resolving any potential grading and ponding issues at the common property line. Phasing of the application will also allow the Town to assess the filling operation and identify any issues that need to be addressed before Council makes a decision for Phase 2.

It is staff's recommendation that the terms and conditions of the agreement be approved and the agreement be executed to allow a site alteration permit for phase 1 area to be issued subject to all approvals being in place.

For further information on this report, please contact either

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Frank Ierfino, Manager of Engineering Services at 905-640-1910 ext. 329 or frank.ierfino@townofws.com

7. ATTACHMENTS:

1. Map of Property at 5511 Bloomington Road
2. Proposed Site Grading Plan/Phasing Plan
3. Flow chart of Proposed Operational Protocol
4. Figure 1- Reforestation area
5. Draft Agreement