

Aggregate extraction is consistent with the Provincial Policy Statement 2014 under the Planning Act. Once aggregate extraction activities cease, the MNR licence requires rehabilitation of the extraction area to ensure it is geotechnically stable and in an environmental condition suitable to be left in perpetuity.

The extraction pits are usually contoured with 3:1 slopes and stabilized with topsoil and vegetation once they are no longer used for extraction. The MNR does not typically require restoration to original topographic contours. The MNR has indicated they are not interested in overseeing non-aggregate extraction related activities such as the filling of pits beyond the minimum necessary for closure.

This results in the existence of large closed extraction pits with limited future land use potential.

Section 2.5 Mineral Aggregate Resources of the Provincial Policy Statement 2014 outlines the provincial vision for the extraction of aggregate resources and rehabilitation of those areas after extraction activities have ceased.

Section 2.5.3.1 states:

Progressive and final rehabilitation shall be required to accommodate subsequent land uses, to promote land use compatibility, to recognize the interim nature of extraction, and to mitigate negative impacts to the extent possible. Final rehabilitation shall take surrounding land use and approved land use designations into consideration.

Section 2.5.4.1 states:

In prime agricultural areas, on prime agricultural land, extraction of mineral aggregate resources is permitted as an interim use provided that the site will be rehabilitated back to an agricultural condition.

It is consistent with provincial policy to rehabilitate aggregate extraction areas back to their original pre-extraction land use, which is usually agricultural land use, within the Town of Whitchurch-Stouffville.

Restoration to allow for agricultural land use typically involves filling the extraction areas to achieve topographic contours (grades) conducive to agricultural activities.

Just as aggregate resources are required to supplement growth in the Greater Toronto Area (GTA), there is also a need to find repositories for excess soil generated from construction activities in the GTA. The GTA has neither the

aggregate resources nor the excess soil repository capacity it needs. Both of these items must be sourced outside of the GTA.

Closed aggregate pits offer the existing infrastructure (roads) and the repository capacity to take the excess soil generated by GTA development activities.

The filling of closed aggregate extraction pits with excess soil from GTA development sites is consistent with Provincial Policy and offers several benefits:

- Excess soil relief for GTA development;
- Restoration of original topographic contours;
- Restoration of agricultural land;
- Restoring the overburden thickness between surface land use and the groundwater table; and
- Economic activity within the Town.

The By-law has been created to mitigate concerns related to the filling of closed aggregate pits such as:

- Importation of unsuitable materials that could impact the land, groundwater and surface water environment of the Town;
- A continuation of the impacts from activities similar to aggregate extraction such as:
 - Traffic;
 - Dust; and
 - Noise.

The By-law is also designed to address the potential for imported fill materials to have an adverse impact on the environment.

Currently there are various regulations and Best Practice documents that speak to the assessment, movement and emplacement of fill materials in the province, however there is no single specific regulatory document that really embraces all aspects. The Ministry of Environment (MOE) is the primary provincial regulatory authority for the protection of the environment. Relevant MOE policies and regulations can be found under the Environmental Protection Act and regulations, such as O.Reg. 347 (waste management) and O.Reg 153/04, as amended (Records of Site Condition). In January 2014, the MOE issued “Management of Excess Soil. A Guide for Best Management Practices”. The document opens with the following statement:

Soil is an important resource. The protection and conservation of soil in Ontario is a valuable component of maintaining the environment for present and future generations. The Ministry of the Environment (MOE) encourages the beneficial reuse of excess soil in a manner promoting sustainability and the protection of the environment. The best practices described within this document are intended to assist those managing excess soil, particularly when the soil may be affected by contamination, in preventing and mitigating the potential for adverse effects.

The excavation, movement and emplacement (filling) of soil are a necessary practice in the province. One of the most suitable repositories for excess soil in proximity to the GTA is former aggregate extraction pits. The filling of pits can enhance the land by returning it to its former grade and use (agricultural).

Appropriate controls are required to ensure filling activities are conducted in a manner to ensure environmental protection and the mitigation of impacts caused by filling activities.

The Site Alteration and Fill By-law is designed to be consistent with, and complementary to, existing regulations and Best Practices administered by other regulatory authorities with jurisdiction.

3.3 Alignment with Strategic Plan

The Site Alteration and Fill By-law are aligned with the Town's Strategic Plan in the following manner:

1. Community Prosperity and Sustainability

Balanced growth, environmental protection, economic development, tourism, community character and identify.

1.1 Preserve and enhance community rural/urban character, beauty and heritage.

1.4 Economic development and job creation.

2. Service Excellence & Community Engagement

High quality, citizen-centered services, responsible to the needs of informed and involved citizens.

3.1 Enhance teamwork and promote collaboration.

3.7 Enhance communication with and engagement of residents and businesses.

3. Quality of Life

Encompasses community safety, diversity, promoting healthy lifestyles, leisure and culture; complements community prosperity and sustainability.

4.2 Enhance public safety through collaboration.

4.0 Site Alteration and Fill By-law Structure

4.1 Overview

The By-law recognizes and defines three specific magnitudes of site alteration and fill activities:

1. Minor scale site alterations which are those with minimal potential to cause a significant impact to the environment and surrounding properties. These alterations must be conducted in accordance with the regulations of other agencies with jurisdiction and should be conducted in a manner consistent with the By-law, but do not require a Permit from the Town. Minor scale site alterations are defined as a total alteration volume of less than 200 m³, approximately 20 tri-axel dump truck loads at approximately 10 m³ per truck, on a property in any 12 month period. The site alterations cannot:
 - Cause an adverse effect;
 - Be out of compliance with any other agency with jurisdiction; and
 - Negatively alter the drainage of adjacent lands.
2. Small Site Alterations that involve site alterations and fill activities that have the potential to cause an environmental impact and affect surrounding properties. These alterations typically involve the extensive use of heavy equipment, contractors and professional services. A Permit is required. Small site alterations are for activities between 200 m³ and 5,000 m³, (approximately 20 to 500 tri-axel truck loads based on 10 m³/truck) on one property in any 12 month period.
3. Large Site Alterations are those that involve site alteration and fill activities with a total cut/fill volume of 5,000 m³ and greater. These alterations have a significant potential for environmental impacts and are typically commercial

operations of significant size and scope. A Permit, Agreement and Town Council approval is required.

The By-law includes the following Sections:

- 1.0 Definitions;
- 2.0 General Prohibitions;
- 3.0 Exclusions;
- 4.0 Requirements for the Issuance of a Permit;
- 5.0 Expiry, renewal, revocation and transfer of Permits and Agreements;
- 6.0 Enforcement and Inspectors;
- 7.0 Orders;
- 8.0 Work done by the Corporation;
- 9.0 Penalty and Offence;
- 10.0 General; and
- 11.0 Effective Dates and Repeal of Predecessor By-laws.

A copy of the By-law is included in Appendix A.

5.0 Complimentary with Other Agencies with Jurisdiction

The Site Alteration and Fill By-law has been designed to complement, supplement and mirror the laws and regulations administered by “other agencies with jurisdiction”. The Town recognizes that many activities associated with site alteration, and in particular, filling, fall within the legal mandate of other regulatory agencies such as:

- Regional Municipality of York - Tree By-law, regional road administration and hydrogeology related to well head protection and aquifer vulnerability;
- Ministry of Natural Resources - Species at Risk, Provincially Significant Wetlands, Fish and Fish Habitat and aggregate extraction;
- Conservation Authorities - flood plains, wetlands and surface water bodies;
- Ministry of Environment - environmental protection including contaminants in soil, groundwater, surface water and air. Land use controls as per O.Reg 153/04, as amended, and the Records of Site Condition.

It is not the mandate of the Town to oversee or enforce the laws and regulations administered by other agencies. However, the Town is committed to fulfilling its mandate for the protection of the residents and the environment of the Town by requiring, in its Site Alteration and Fill By-law, that applicants provide documentation (to the satisfaction of the Director) to indicate that the proposed site

alteration and fill activities are conducted in compliance with the requirements of all other agencies with jurisdiction.

The Site Alteration and Fill Permit will include the Condition that all of the requirements of all other agencies with jurisdiction must be satisfied at all times.

It is up to the applicant to provide sufficient documentation to the satisfaction of the Director that they are in compliance with all other agencies with jurisdiction.

6.0 Ontario Regulation 153/04, as amended – Records of Site Condition

6.1 Overview

Part XV.I of the Environmental Protection Act includes Ontario Regulation 153/04, as amended - Records of Site Condition. The Act and related regulations is administered by the Ministry of Environment O.Reg. 153/04, as amended, and the document entitled “Soil, Groundwater and Sediment Standards for Use Under Part XV.I of the Environmental Protection Act”, April 15, 2011, provide the requirements and industry standards for the assessment of contaminated sites.

Although components of these regulations may not be directly applicable to some site alteration and filling activities, they have been adopted as best industry practices and offer the best guidance and approach to the assessment of the environmental condition of properties and evaluation of potential impacts from activities.

The Site Alteration and Fill By-law is designed to complement these regulations when addressing environmental, land use and soil quality issues.

6.2 Soil, Groundwater and Sediment Standards

Although not specifically designed for site alterations and filling, the Soil, Groundwater and Sediment Standards for Use Under Part XV.I of the Environmental Protection Act, April 15, 2011, will be used as the best available criteria for evaluating site alteration and fill activities.

When determining the appropriate Standards to be used in any situation, the methodology in O.Reg. 153/04, as amended, will be adopted. The applicable Standards (Table) selected must be consistent with the definition of the land use defined in O.Reg. 153/04, as amended, and that land use must be consistent with Town zoning.

The default Standards will be the Table 1: Full Depth Background Site Condition Standards for Agricultural or Other Property Use.

The use of any other Standards will be at the discretion of the Director based on the provision of scientific rationale in accordance with O.Reg. 153/04, as amended.

The Regional Municipality of York has its own approach to the application of these Standards outlined in Report No. 4 of the Transportation and Works Committee, Regional Council Meeting of April 23, 2009 entitled “Regional Procedure for Responding to Requests Made in Accordance with Ontario Regulation 153/04 to use Non-potable Remediation Standards”.

Deviation from the default standards must be consistent with the requirements of all other agencies with jurisdiction (including the Regional Municipality of York) prior to consideration by the Town.

6.3 Record of Site Condition

The Environmental Protection Act and regulations dictate when a Record of Site Condition (RSC) is required. In general, this is triggered by a change in land use (as defined by O.Reg. 153/04, as amended) from less sensitive land use (i.e. industrial/commercial) to more sensitive land use (i.e. residential/parkland).

In cases where the need for a Record of Site Condition is not required by provincial regulations, the Town may, at its discretion, request that a Record of Site Condition be filed as part of the requirements for a Site Alteration and Fill Permit.

The reason the Town may request a Record of Site Condition when it may not be provincially required is to ensure that a consistent, industry familiar process of environmental assessment and documentation has been followed during a particular site alteration.

6.4 Interpretation of O.Reg. 153/04, As Amended When Filling Former Aggregate Pits

Former aggregate pits within the Town are usually in areas zoned by the Town as rural farmland and defined as “Agricultural Property Use” under O.Reg. 153/04, as amended. The rural areas are usually within the Oak Ridges Moraine and subject to the requirements of the Oak Ridges Moraine Plan. Town zoning usually allows farming and rural residential use on these lands.

During the period when the property has been subject to aggregate extraction, O.Reg. 153/04, as amended, includes the following in Part I - Definitions, Interpretation and Application 1. (3):

“Industrial Use” – means any of the following uses of land or of a building on the property:

7) Use for the production of oil or gas or for mining or quarrying.”

The regulation indicates that Aggregate extraction is an “Industrial Land Use”. The regulation further states under Part IV – Change of Property Use and Definitions for the Act, industrial, commercial, residential and parkland use:

“11. (1) - For the purposes of Section 168.3.1 of the Act, “industrial use”, “commercial use”, “residential use” and “parkland use”, in relation to the use of property, have the meanings given by Subsection 1 (3) of this Regulation. O. Reg. 153/04, s. 11 (1).

(2) - For the purposes of the Act and this Regulation, a reference to a change in the use of a property does not include a reference to a change in the zoning of the property under a municipal by-law. O. Reg. 153/04, s. 11 (2).”

The regulation further states under changes of use, s. 168.3.1 (1)(b) of the Act:

“14. A person shall not change the use of property for the purposes of Clause 168.3.1 (1) (b) of the Act in any of the following manners:

- 1. A change from an industrial use to an agricultural or other use or to an institutional use.*
- 2. A change from an industrial use to more than one type of property use, including any or all of the following:*
 - i. Agricultural or other use.*
 - ii. Institutional use.*
 - iii. Parkland use.*
 - iv. Residential use.”*

Based on the requirements of O.Reg. 153/04, as amended, any former aggregate extraction pit is interpreted to be Industrial Use. Also, based on the definitions of O.Reg. 153/04, as amended, any property use that involves agricultural activities including animal husbandry, dairying, field crops, forestry etc., is defined as Agricultural Use.

Former “Agricultural Use” properties that have been used for aggregate extraction become “Industrial Use” properties. To change an Industrial Use property to an Agricultural Use property requires the filing of a Record of Site Condition for Agricultural Use.

The regulations require that a Record of Site Condition for Agricultural Use be filed prior to any agricultural activity taking place on a former Industrial Use property (quarrying, such as aggregate extraction).

The current interpretation is that the property can remain Industrial Use (MOE definition) until filling is complete at which time the property has no future use except the use allowed by Town zoning which would be Agricultural Use.

Prior to conducting Agricultural Use activities, a Record of Site Condition would be required. A Phase One ESA, Phase Two ESA and possibly a Risk Assessment may be required as per O.Reg. 153/04, as amended, to support the filing of a Record of Site Condition.

Confirmation from the MOE and/or legal counsel will be required to confirm this interpretation on a site by site basis.

6.5 Soil Quality

The quality of soil used for filling as part of a site alteration must conform to the minimum standards outlined in “Soil, Groundwater and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act”, April 15, 2011.

The Standards are organized in a series of Tables based upon “Property Use” (as defined by O.Reg. 153/04, as amended), Groundwater Condition (Potable or Non-Potable) and other site specific details. Table 1 provides Full Depth Background Site Condition Standards for the province. The remaining Tables are Generic Site Condition Standards created by the MOE for common site condition situations using a risk based approach. In addition to the Generic Standards, the MOE allows the development of Site Specific Standards developed following an MOE approved Site Specific Risk Assessment (SSRA). Although the Generic Site Condition Standards and SSRA Standards are for the environmental assessment of sites, and in particular for use when filing a Record of Site Condition, they offer the best guidance available for evaluating soil quality when importing soil during filling activities.

The most stringent criteria provided in the Standards is the Table 1: Full Depth Background Site Condition Standards for Agricultural or Other Property Use. These are the default standards outlined in the By-law.

The By-law allows consideration of the use of other Generic Standards or Site Specific Standards developed from a Site Specific Risk Assessment, provided the rationale is in compliance with MOE requirements as outlined in O.Reg. 153/04, as amended, and conforms to the requirements of all other agencies with jurisdiction. It is up to the Permit applicant to demonstrate to the Town that the proposed site alteration and fill activities (including soil quality standards) are compliant with MOE regulations and best practices guidelines.

The applicant must demonstrate that soil sampling protocols are consistent with O.Reg. 153/04, as amended, and the document entitled "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", December, 1996.

7.0 Agreement for Large Site Alteration Permit Applications

The By-law requires the owner of any property that will be the subject of a Large Site Alteration (5,000 m³ and greater) to enter into an Agreement with the Town and have the Agreement approved by Town Council as one of the Conditions of a Site Alteration and Fill Permit. A copy of an Agreement Template for Large Site Alterations is included in Appendix B

The Agreement reflects the requirements of the By-law and would include such things as:

- Site Alteration and Fill Management Plan (SA&FMP);
- Security Deposit (in Cash or Irrevocable Letter of Credit);
- Insurance (liability and environmental);and
- Conditions (including under what circumstances the Agreement would be terminated).

The termination of an Agreement (and ending the need for a Security Deposit) would be based on meeting the Conditions of the Agreement, Permit and any Orders, following the completion of a site alteration.

In some cases, the Conditions could include the completion of a technical report and post closure monitoring. In other cases, it could also involve the filing of a Record of Site Condition.

Since the Record of Site Condition process is well defined and widely used, it may be an appropriate Condition even in cases where it is not required by provincial regulations.

The reason the Town may request a Record of Site Condition when it may not be provincially required is to ensure that a consistent, industry familiar process of environmental assessment and documentation is followed during and after a particular site alteration.

8.0 Town Administration and Oversight

8.1 Overview

Of significant concern to the Town and the public is the ability of the Town to effectively administer and provide oversight of site alteration and fill activities and in particular Large Site Alterations involving the filling of former aggregate pits. Historically, aggregate extraction activities have been conducted under a licence administered by the MNR. The MNR required a minimum amount of work to close the pits which often involved the importation of fill soil to achieve 3:1 slopes followed by the addition of topsoil and seed to establish final conditions to render the pit environmentally and geotechnically stable. In recent years, there has been a desire by property owners to restore some of these pits to original grade and, in doing so, accommodate the demand for capacity to accept excess soil from GTA development. Since the MNR has indicated their desire not to manage filling operations once the final requirements of the aggregate licence have been fulfilled, it then falls to the Town to evaluate, Permit, and oversee these activities.

A review of previous commercial scale filling operations within the Town have identified some concerns with the Town's ability to effectively review Permit applications, develop Conditions in Permits and Agreements, and conduct oversight. To address these concerns, the Town has:

- Updated the Site Alteration and Fill By-law (Appendix A);
- Updated the Agreement Template for a Large Site Alteration (Appendix B);
- Created a Site Alteration and Fill Permit Template with Conditions (Appendix C);
- Created an improved Application Form (Appendix D);
- Updated Section 22 of the Fees and Charges By-law to include a Cash Deposit and Security Deposit (Appendix E);

- Created a Template for a Site Alteration and Fill Management Plan to assist applicants in meeting Town requirements (Appendix F);
- Created a Template for Fill Quality Control, Environmental Protection, Monitoring and Oversight Flow Chart to illustrate to applicants the Town's expectations (Appendix G);
- Developed an Administrative Flow Chart - Site Alteration and Fill By-law to assist Town staff and stakeholders in understanding the role of the Town (including Council) in the application, oversight and administration of site alteration and fill activities (Appendix H);
- Required the provision of a Site Alteration and Fill Management Plan which outlines the operational protocols for the site that can be monitored by Town staff and the Town's Peer Review Consultant to confirm compliance with Conditions;
- Dedicated 40% of a new staff position (Engineering Technician) to site alteration and filling administration and oversight; and
- Engaged a Peer Review Consultant (R. J. Burnside & Associates Limited) with over 320 staff who can provide engineering and scientific resources to meet the needs of the Town in evaluating and conducting oversight of site alteration and filling activities.

8.2 Application Fee

The application fee applicable to a particular site alteration is included in the Town's Fees and Charges By-law 2013-171-F1 (as amended). The fee is \$1,112.00 for site alterations up to 5,000 m³ and \$5,572.00 for site alterations of 5,000 m³ and greater. A copy of the applicable section of the Fees and Charges By-law is included in Appendix E. Applicants must confirm they are using the most current fee schedule.

8.3 Cash Deposit

The application for a Permit would require a Cash Deposit held on account with the Town.

The Cash Deposit would be used for such things as:

- Peer Review and specialty oversight and review services;
- Field Inspections;
- Surveying, sampling and monitoring to confirm compliance with the requirements of the Permit;

- To fulfill the Conditions of a Town Order when the owner/operator is unwilling or unable to comply. Such as, cleaning roads, monitoring, site control and provision of required reports.

The un-used portion of the Cash Deposit is refundable at the termination of the Permit and/or Agreement.

8.3.1 Cash Deposit for Small Site Alterations between 200 m³ and 5,000 m³

Upon submission of an application for a Site Alteration and Fill Permit the applicant will provide the application fees outlined in the Town's Fees and Charges By-law. In addition, a Cash Deposit will also be required to cover the costs of the Town's Peer Review Consultant, and any other specialized services including Town technical staff.

The Cash Deposit amount will be calculated as follows:

For site alterations between 200 m³ and 5,000 m³ (approx. 20 to 500 tri-axel truck loads at 10 m³/truck)

- An amount of \$4,000; and
- \$1.00/m³ of total site alteration volume.

The Cash Deposit will be based on the site alteration volume conducted during the period of the Permit (12 months). The Cash Deposit must be topped up on a regular basis, should it become depleted.

8.3.2 Cash Deposit for Large Site Alterations 5,000 m³ and Greater

For site alterations of 5,000 m³ or greater (approx. 500 tri axel-truck loads at 10 m³ per truck), an Agreement will be required and approved by Council. The Cash Deposit requirement is:

- A minimum amount of \$10,000; and
- \$1.00/m³ of total site alteration volume to a maximum of \$100,000.

8.4 Security Deposit

The Security Deposit consists of a Letter of Credit or cash held by the Town that may be used at the Town's discretion to address the failure to comply with an Order. The Town may access the Security Deposit to retain professional services

or contractors to conduct work to achieve compliance with an Order made under the Site Alteration and Fill By-law. The Security Deposit must be replenished when requested by the Town, to stay in compliance with the Permit.

The Town will require a Security Deposit as a Condition of a Site Alteration and Fill Permit.

The Security Deposit is required to provide the Town with the fiscal resources to address any liabilities that could result from granting permission to conduct site alteration and in particular fill activities. The Town needs to have the fiscal resources to address any liabilities that could exist during or after the site alteration and fill activities. The fiscal resources must be sufficient to complete or close the site alteration at any point in time should the owner be unwilling or unable to do so. The Security Deposit must be able to survive the economic and/or business entity demise of the owner. The owner being defined as the property owner/applicant/operator. The Security Deposit must be in the form of an Irrevocable Letter of Credit or cash. The potential fiscal liabilities include, but are not limited to, such things as:

- Operational Liabilities:
 - Dirt on roads
 - Dust
 - Noise
 - Surface runoff
 - Fencing
 - Site access control
- Environmental Liabilities:
 - Contaminated soil
 - Soil, surface water and groundwater impacts
 - Dust and nuisance impacts
 - Closure and Post Closure Liabilities:
 - Closure or Interim Closure of the site alteration should it be left in an uncompleted state
 - Post closure monitoring and care, as required
 - File a Record of Site Condition, if required.

The amount of Security Deposit would be based on the specific details of the proposed site alteration. Site alterations that did not involve the importation of fill would not have the same liability as a fill operation as the most significant

environmental liability is associated with the importation of potentially contaminated or deleterious materials.

Formulas are provided in the Fees and Charges By-law as a basis for calculating the Security Deposit.

8.4.1 Security Deposit for Small Site Alterations between 200 m³ and 5,000 m³

For small site alterations that involve the importation of fill from off-site, a Security Deposit in the form of cash or an Irrevocable Letter of Credit shall be provided naming the Town as the sole party that can draw against the instrument and at the discretion of the Director.

The Security Deposit is due at Permit issuance.

The amount of Security Deposit for a small site alteration shall be calculated as follows:

- \$5.00/m³ of the total cut and fill site alteration volume

8.4.2 Security Deposit for Large Site Alterations of 5,000 m³ and Greater

For Large Site Alterations the amount of Security Deposit shall be calculated as follows:

- An annual deposit of \$50,000.00; and
- \$0.40/m³ of the total cut and fill site alteration volume from the prior year (estimated in first year) with the cumulative total not to exceed \$1,000,000.

The Security Deposit is for situations when the owner/operator is unwilling or unable (due to financial, business or other reasons) to comply with Orders issued by the Town. It is designed to cover the costs of such things as:

- Securing an uncontrolled or abandoned site out of compliance with Town Orders;
- Clean up or remediation of contaminated soil, surface water and groundwater;
- Interim or final closure of a site in accordance with the Site Alteration and Fill Plan.

The Security Deposit must be able to survive the demise of the owner/operator's financial and business resources. It would only be accessed if the site is out of compliance with a Town Order and/or the Cash Deposit was depleted.

8.4.3 Rationale for the Scaling of Security Deposits for Large Site Alterations

It is recognized that liability is directly tied to site operations, and in particular, the potential costs to address possible liabilities at any point in time. The amount of Security Deposit is scaled to match the liability. The liability being based on the size of the site alteration.

Example calculations of potential scenarios of liability costs are as follows:

- Concerns with the quality of soil imported to a site receiving 500 trucks per day for one day. This would roughly equal 5,000 m³ of soil. If the soil was found to be contaminated, the cost to separate, test and evaluate the soil is estimated at \$30,000. The cost to remove all of the material for landfill disposal, if it was found to be unsuitable to remain on site, would be \$100/m³ to dig, haul and dispose. Total costs would be in the order of \$530,000.
- Interim control and closure of an active 40 ha (100 acre) site, assuming all fill material is suitable and all monitoring showed no impacts, would require contouring, topsoil, seeding and maintenance. Post closure maintenance and monitoring for several years would also be required followed by the studies required to file a Record of Site Condition. Costs could be in the order of \$300,000.
- Costs to remediate a site partially filled with unsuitable materials that caused an impact to groundwater moving off site would require assessment, remediation of soil and groundwater, and long term maintenance. Costs could be in the order of \$500,000 and significantly higher.

It is for these reasons that the Town requires the provision of a Security Deposit. The unused portion is refundable at the termination of the Agreement.

8.4.4 Use of Cash Deposit and Security Deposit

The Cash Deposit will provide the Town the resources to retain appropriately qualified Peer Review Consultants to oversee all aspects of the Site Alteration including:

- Source Site Assessment;
- Report, manifest, and document review;
- Site Inspections;
- Site topographic survey, to confirm contours and volumes;

- Drilling and test pitting to confirm sub-surface conditions; and
- Collection and analysis of samples for soil, surface water, groundwater and air quality.

The Peer Review Consultant would assist the Town's Engineering Technician, and By-law Officer with inspections and make recommendations to the Director.

The Peer Review Consultant could provide the expertise to review the completion of the site alteration and make recommendations for terminating the Permit and/or Agreement and/or Orders to allow the return of the unused portions of the Cash Deposit and Security Deposit.

8.5 Administration Flow Chart – Site Alteration and Fill By-law

The internal administration of Site Alteration and Fill Permit applications through oversight and to completion is based on the following:

- A clear By-law (Appendix A) which requires applicants to retain appropriately qualified technical professionals to assist in preparing the Application Form and providing supporting documents.
- A detailed Application Form (Appendix D) that can be quickly and effectively screened for completeness by Town administrative staff receiving the application.
- Town's Peer Review Consultant with the technical resources to review the application and supporting documents and provide timely comments and recommendations.
- A Permit Template (Appendix C) with general conditions that can be populated with site specific details.
- An Agreement Template (Appendix B) for Large Site Alterations easily populated with site specific details for those applications that are 5,000 m³ and greater and require Council approval.
- Town's Peer Review Consultant to provide assistance to the Director and the Town's legal counsel for the preparation of:
 - Permit Conditions;
 - Agreement Terms and Conditions (if required); and
 - Council in Committee Report (if required).

Once the Permit and Agreement (if required) are approved, the Town's Engineering Technician, By-law Officer and Peer Review Consultant would undertake the role to oversee the site alteration.

The Town's Engineering Technician, Peer Review Consultant, and Town's By-law Inspector would:

- Review source site assessments;
- Review reports, manifests and other documents;
- Inspect the site and conduct whatever assessment work is needed to confirm compliance with the requirements of the Permit and/or Agreement including:
 - Topographic surveys to confirm grades and contours;
 - Drilling and test pitting to evaluate subsurface conditions; and
 - Collection and analysis of samples for soil, surface water, groundwater and air quality.
- Determine compliance of all activities in accordance with the Site Alteration and Fill Management Plan;
- Review and respond to complaints; and
- Provide recommendations to the Director regarding the issuance of Orders.

Should issues of non-compliance be found, the Director may request the By-law Officer issue an Order. The Town's Engineering Technician and Peer Review Consultant would assist the By-law Officers to ensure compliance with the Order.

In cases where the owner/operator was unwilling or unable to meet the Conditions of the Permit and/or Agreement and/or Orders, the Director would have the option to use the Security Deposit to take whatever action is necessary to achieve compliance. This would include:

- Retaining third party security resources to secure the site and prevent illegal activities;
- Having the Peer Review Consultant take over whatever work necessary to achieve compliance; and
- Retaining construction contractors administrated by the Town's Peer Review Consultant to conduct whatever site work is necessary to achieve compliance.

The Site Alteration and Fill Permit Application Administration Flow Chart is included in Appendix H

8.6 Application Submission

The Application for a Site Alteration Fill Permit requires the Applicant to determine the nature scope and reason for conducting a site alteration. A copy of the Application Form is included in Appendix D.

For minor site alterations that are less than 200 m³ of total cut and fill, no Permit is required. For site alterations on lands under the jurisdiction of a Conservation Authority, no permit is required by the Town.

Section 2.0 of the By-law includes General Prohibitions. Section 3.0 provides Exclusions.

The first step an applicant takes involves retaining the services of a suitably qualified professional, licensed in the province of Ontario. This could include a Professional Engineer (P.Eng.), Professional Geoscientist (P.Geo.), or similarly licensed qualified individual as approved by the Director. The multi-disciplinary nature of site alterations and the potential to overlap with the jurisdiction of multiple regulatory agencies requires professional assistance.

The Site Alteration and Fill Permit Application Form is included in Appendix D. The form requires the applicant to provide technical details regarding the site and proposed site alteration. The form outlines the Application Fees and Cash Deposit and items to be submitted with the Application.

The Application requires the completion of a Pre-Screening Questionnaire by an appropriately qualified and licensed P.Eng. or P.Geo. (or other similarly qualified professional, as approved by the Director). The purpose of a licenced professional preparing and signing the Pre-screening Form is to streamline the application review process by reviewing the technical aspects prior to application submission.

The Application is received by Town administrative staff, reviewed for completeness and if complete, logged into the system and forwarded to the Manager of Engineering.

If incomplete, the applicant will be notified of the missing components. The application will not be processed until complete.

8.7 Permit Application Review Process

Upon the Town's receipt of a complete application, the Manager of Engineering and Engineering Technician briefly review the file prior to forwarding it to the Town's Peer Review Consultant for a detailed technical review.

The Town's Peer Review Consultant conducts a detailed review, liaises with other agencies with jurisdiction (if required for clarification) and provides a written response with comments and recommendations.

The comments and recommendations are then forwarded to the applicant. The applicant responds to the comments and addresses any outstanding issues.

8.8 Preparation of Agreement and/or Permit

8.8.1 Public Consultation

Once the Town is satisfied with the Application and supporting documents, the need for public consultation will be determined. All large site alterations (5,000 m³ and greater) will require public consultation.

Input from public consultation is considered when preparing the conditions of the Agreement and Permit.

8.8.2 Agreement

Large site alterations will require an Agreement. The Town's legal counsel will prepare the agreement with the assistance of the Manager or Engineering and the Town's Peer Review Consultant. An Agreement template is included in Appendix B.

8.8.3 Council Approval of an Agreement

Any Large Site Alteration requires an Agreement to be approved by Council. A Council in Committee Report will be prepared by Town staff (with assistance from the Peer Review Consultant).

Prior to the Council meeting, a Public Information Session will be hosted by the Applicant. During the Council meeting, presentations may be made by the following:

- Applicant
- Town staff
- Peer Review Consultant
- Public

Council will decide to approve or disapprove the application and/or make recommendations for action.

8.9 Permit Approval and Conditions

Town staff (following Council approval of a Large Site Alteration with an Agreement) will address any remaining Conditions and issues. Once all is satisfactory, the Permit will be approved by the Director.

8.10 Oversight of Site Alteration and Fill Activities

Town oversight of the site alteration and fill activities and monitoring compliance with Conditions will involve the following resources:

- Director
- Manager of Engineering
- Engineering Technician
- Peer Review Consultant
- By-law Officer

Refer to Appendix H for an illustration of Town Administrative oversight.

8.11 Orders, Fines and Compliance

The Town will have the following fiscal resources to draw on:

- Fees for application administration cost recovery;
- Cash Deposit for peer reviewer, oversight monitoring and inspection costs incurred; and
- Security Deposit from which to draw funds should the owner/operator be unwilling or unable to comply with Permit Conditions or Orders. Should site alteration activities be out of compliance with the Conditions of the Agreement and/or Permit, the Town may issue Orders with specific requirements and timelines to achieve compliance. Fines and other penalties including the revocation of the Permit are also possible. Should the owner/operator be unwilling or unable to achieve compliance with the Orders, the Town may direct its Peer Review Consultant to take over aspects of the operation or retain the services of specialists or contractors to secure the site against illegal activities and bring conditions back into compliance.

All orders must be complied with, even after the expiry or revocation of a Permit.

A Site Alteration Violation and Investigation Fee may apply in any situation where a Permit is not obtained prior to commencement of work or activities for which a Permit is required in accordance with the Site Alteration and Fill By-law.

The Violation and Investigation Fee is determined by the Director and could be equivalent to a maximum of 100% of the applicable Application Fees and Municipal Service Fees. The Violation and Investigation Fee is in addition to all other fees, charges and securities that are required as part of the permitting process.

A copy of the Fees and Charges By-law is included in Appendix E.

8.12 Permit Renewal

Permits are issued for a maximum of one year except for Large Site Alterations with an Agreement. An application for renewal must be made to the Director in writing at least three months prior to the Permit expiry date to allow sufficient processing time prior to the expiry date.

A Permit Renewal may be processed up to six months following the expiry date of a Permit. After six months, a complete new application is required. All conditions of the previous Permit must be in compliance prior to receiving a new Permit. The Permit Renewal Fee is outlined in the Fees and Charges By-law (Appendix E).

Large Site Alterations with an Agreement do not have a specified expiry date (unless included as a Condition). The Town will conduct an annual review to confirm compliance with Conditions.

8.13 Permit and/or Agreement Termination

The Permit and/or Agreement can be terminated at the completion of the site alteration when all final Conditions have been satisfied including:

- All Orders satisfied;
- All work completed and confirmed;
- All reports and documents submitted;
- All post closure monitoring complete; and
- Record of Site Condition acknowledgement from the MOE provided (if required).

Once the Director is satisfied that all Conditions have been met, the Permit and/or Agreement may be terminated and the unused portion of the Cash Deposit and Security Deposit returned.

8.14 Town Staff and Resources for Site Alteration and Fill Oversight

8.14.1 Staffing and Resource Strategy

As outlined in previous sections, the Town has prepared a significantly enhanced mechanism to manage site alteration and fill activities, and in particular, Large Site Alterations involving the commercial filling of former aggregate pits.

As outlined, the applicant will be required to provide a Cash Deposit (that must be replenished when depleted) to cover the cost of peer review and oversight activities. Should significant issues arise requiring the issuance of Orders, the Town may use the Security Deposit (which must be replenished when depleted), to retain the resources to perform any necessary tasks should the owner be unwilling or unable to achieve compliance with an Order.

This mechanism of requiring significant financial assurance to be held by the Town allows the Town to retain the necessary technical resources when needed, for as long as needed, without straining the Town's in house staff resources.

8.14.2 Staff Resources

Site Alteration Permit administration is led by the Manager of Engineering who is responsible to the Director. The Director is identified in the By-law as the person with the ultimate responsibility for issuing Permits and approving such things as deviating from default soil quality standards.

A new position with a dedicated 40% of an Engineering Technician's time, reporting to the Manager of Engineering, has been created specifically to administer Site Alteration and Fill Permits.

The Engineering Technician is responsible for ensuring compliance with the Conditions of Agreements and Permits, including conducting site inspections, reporting and administrative requirements.

The By-law Officer is responsible for issuing Orders for any issues of non-compliance identified by the Engineering Manager's team or identified during inspections.

The Administrative Flow Chart in Appendix H identifies when and where these resources are allocated in the process.

8.14.3 Town Council - Approvals and Updates

All Large Site Alterations require an Agreement approved by Council. A Permit cannot be issued without a Council approved Agreement for a Large Site Alteration. Agreements cannot be terminated without the approval of Council.

The Manager of Engineering provides Council an Annual Status Report of Large Site Alterations which include the following:

- A list of all Large Site Alterations with Agreements
- A list of any Large Site Alterations conducted illegally without an Agreement, and the Town's response/Order;
- Summary of the Annual Permit Review for each site including:
 - The volumes of fill imported;
 - Proposed filling for next year;
 - The results of all monitoring and reporting;
 - Summary of complaints and issues;
 - Identification of any issues of non-compliance;
 - Application by the owner to change any Permit Conditions;
 - Recommendation of staff regarding the continuation of the Permit and any updates to Conditions required;
 - Other relevant information to keep Council informed as to the status of Large Site Alteration activities; and
 - Any other information requested by Council.

8.14.4 Peer Review Consultant and External Resources

The Town's engineering and environmental Peer Review Consultant, R.J. Burnside & Associates Limited (Burnside), has over 320 staff and almost 45 years of providing services to municipalities. Burnside serves to assist with the review and oversight of Site Alteration and Fill Permits utilizing staff resources including:

- Engineers, scientists and technicians ranging from field inspectors to doctorate level;
- Professional Geoscientists (P. Geo.) that are Qualified Persons- Environmental Site Assessment (QP_{ESA}) recognised by the MOE as per O. Reg. 153/04;
- Professionals recognized as Expert Witnesses for hearings and litigation; and

- Survey crews with GPS equipment for sub-centimetre accuracy.

Burnside staff bring a wealth of knowledge and experience to the Town both from working in similar roles with other municipalities (i.e., Newmarket, Mono, etc.) and the private sector (land developers, gravel pit operators etc.).

Burnside is available to assist the Town with all aspects of the oversight of site alteration and fill activities including:

- Peer review of applications and supporting technical reports;
- Recommendations of Conditions for Permits, Agreements and Orders;
- Oversight of activities through auditing of paperwork and documentation;
- Site inspections, surveying and sampling (soil, air, groundwater, surface water, noise, etc.);
- Peer review of reports and cross checking data provided against site inspection and audit findings; and
- Assistance with technical training of Town staff.

The cost for retaining Burnside and outside specialist staff is paid from the Cash Deposit and/or Security Deposit; all costs are borne by the applicant.

8.15 Auditing and Inspections

8.15.1 Auditing

Once a Permit has been approved, the oversight of site alteration activities becomes active as outlined in the flow chart in Appendix H. Town staff, with the assistance of their Peer Review Consultant, will conduct regular audits of the site alteration process as outlined in the Site Alteration and Fill Management Plan (refer to Appendix F for a sample template). The Plan is required to include protocol for Fill Quality Control, Environmental Protection, Monitoring and Oversight as outlined in Appendix G. The purpose of the audit is to ensure all aspects of the Plan are being followed; in particular, the documentation related to the assessment of source sites and issuance of transportation tickets.

As a minimum, on a weekly basis, the Town will undertake site inspections and audit activities. The weekly audits focus on determining compliance with the Site Alteration and Fill Management Plan and could include:

- Review of source site assessment documentation including Phase 1 ESA reports, Phase 2 ESA reports, sampling results, Qualified Person reports approving the source site and issuing tickets for specific volumes of material;
- Comparison of volume and transportation tickets to receipts at the site;
- Review of placement documentation and GPS coordinates;
- Review of site records at gate house;
- Review of complaints and incidents;
- Review of gate house sampling details and results;
- Review of deposit area sampling and results;
- Review of truck counts versus topographic survey and site;
- Review reports and monitoring results; and
- Check status of Permit Conditions, Cash Deposit and Security Deposit.

A brief Audit Report will be prepared documenting the audit and any outstanding issues brought to the attention of the Manager of Engineering and/or Director for action. Weekly Audit Reports will be used to inform the Annual Report to Council.

8.15.2 Site Inspections

To supplement weekly auditing, a site inspection is conducted at a weekly minimum by Town staff with the assistance of specialized staff from the Peer Review Consultant when needed. The purpose of the site inspection is to confirm that site activities occur in accordance with the Site Alteration and Fill Management Plan and the Conditions of the Permit, Agreement and Orders. Site inspections will be conducted randomly and without prior notice to the owner. Health and Safety is of the highest priority so it is expected that the Town inspector will comply with all site health and safety requirements which could include site specific training provided by the operator. The inspector would identify themselves to the gate house and be given immediate access to the site in accordance with health and safety protocols.

Weekly inspections focus on areas of concern including:

- Mud and dust on the road;
- Truck traffic;
- Road conditions;
- Dust, noise and impacts to public and local landowners;
- Gate house protocols and records;
- Gate house sampling and records;
- Inbound truck inspections and sampling;

- Conversations with gate house staff, site staff and truck drivers to cross check information;
- Fill area evaluation and sampling;
- Surface water flow and conditions;
- Condition of silt fence, security fence and vegetation;
- Monitoring wells and sampling;
- Sampling fill materials;
- GPS of points of interest;
- Photo documentation; and
- Written notes.

Site inspections include random sampling for items of concern which could include:

- Sampling of soil on trucks at the deposition location (fill site), or anywhere on the site either at surface or below surface via test pits or drilling;
- Collection of readings using a Photo-ionization detector (PID) and similar instruments;
- Surface water and/or groundwater sampling or screening using portable instruments;
- Measurement of air and noise conditions;
- Photo documentation; and
- GPS locations of sampling points and items of interest.

The sampling of soil includes selection of parameters of concern including:

- Metals and inorganics;
- Petroleum hydrocarbons;
- Volatile organic compounds (VOC);
- Poly-cyclic aromatic hydrocarbons (PAH);
- PCB's; and
- Additional parameters of interest.

Results of the field inspections are reviewed along with the reports provided by the operator and the Conditions of the Permit.

Site topography will be checked using a survey technician from the Peer Review Consultant to evaluate elevations in comparison to reports and truck count data.

Site inspections may utilize specialized staff from the Peer Review Consultant with instrumentation and expertise for those components where Town staff need assistance. The cost is covered through the Cash Deposit.

The Site Alteration and Fill Management Plan is the primary document by which to evaluate results of site inspections and audits.

Results of weekly inspections are tracked to provide a resource for the preparation of the Annual Report to Council.

8.16 Maintaining Compliance

As outlined in the preceding sections, the Town has developed the protocols and resources to adequately administer Site Alteration and Fill Permits including Large Site Alterations involving the commercial filling of former aggregate pits.

Compliance with the Permit, Agreement and Orders is assessed by the Town on a regular (minimum weekly) basis and issues of non-compliance identified for action. The ability to access the Cash Deposit and Security Deposit provide the Town with the financial resources to address issues. The Town has a new dedicated staff person (40% of a full time) and an immediately available Peer Review Consultant with significant technical resources to address any concerns.

Site auditing and inspections (minimum weekly) provide the Town with an ongoing picture of site activities and the potential for future issues.

The requirement for regular reporting from the operator and staff provides a track record as to how the site alteration is proceeding. The Annual Report to Council will keep Council informed as to large site alteration and fill activities within the Town and any recommendations for future improvements to the Guideline and oversight protocols.

Issues of non-compliance will be identified and addressed quickly and effectively.

8.17 Annual Reviews

As a Condition of each Large Site Alteration, the Site Alteration and Fill Management Plan (SA&FMP) must be reviewed and updated to maintain compliance with current Town By-laws and requirements while maintaining compliance with all other agencies with jurisdiction. The annual review and update to the SA&FMP must be submitted to the Town along with all required monitoring reports for review. Compliance with Permit and Agreement Conditions is required in order for site alteration and filling activities to continue.

The Guideline Document and other documents prepared in support of the Site Alteration and Fill By-law will be reviewed and updated annually to maintain consistency with changing regulations, best practices, and the needs of the Town. Revisions to the Guideline Document and other related documents (noted in the Appendices) will be provided to Council as part of the Annual Report.

Part B - Application

9.0 Requirements for Issuance of a Permit

A Site Alteration Permit is required for any activity not covered under Section 3.0 Exclusions, that will alter the grade (topography) of land through the movement, removal or placement of topsoil, soil or fill. Site alterations with a total cut and fill volume of 5,000 cubic metres or greater on any property in a 12 month period are deemed to be a Large Site Alteration and have additional requirements including the need to enter into an Agreement with the Town.

9.1 Application

Anyone applying for a Permit shall provide a completed Application for a Site Alteration and Fill Permit with all required supporting information in the form outlined in Appendix D, as may be amended by the Director.

9.2 Application Fee, Cash Deposit, Security Deposit and Municipal Service Fee

- a) Anyone applying for a Permit must calculate and submit the appropriate amounts of the following items in accordance with the Town's Fees and Charges By-law 2013-171-F1 (Appendix E), as amended:
 - i. Application Fee in cash at the time of application submission;
 - ii. Cash Deposit in cash at the time of application submission;
 - iii. Security Deposit in the form of a Letter of Credit or cash prior to issuance of a Permit;
 - iv. Municipal Service Fee in the form of cash payable prior to issuance of a permit or in the case of a Large Site Alteration, payable as per the terms of the Agreement and/or Permit;
 - v. Permit Renewal Fee (if required) in cash payable at the time of the request to the Director for a Permit renewal; and

- vi. Site Alteration Violation and Investigation Fee (if required) in cash payable at the time of application submission in the amount determined by the Director.

A copy of the Fees and Charges By-law is included in Appendix E. The applicant must confirm they are using the most current version.

- b) By submitting an Application for a Site Alteration and Fill Permit, the applicant agrees to the Town using the provided fees and deposits in the following manner:
 - i. Application Fee to cover the costs of the Town's administrative staff to administer the application and permitting process.
 - ii. Cash Deposit to cover the costs of reviewing support documents and oversight of site alteration activities by the Town's engineering and technical staff, By-law Enforcement Officer(s), Peer Review Consultant, and other technical experts the Town may retain. The Cash Deposit must be replenished when requested by the Director or the application process may stop and/or the Permit may be revoked.
 - iii. Security Deposit (in the form of a Letter of Credit or cash) to cover the costs incurred by the Town to address any issues of non-compliance with an Order. The Security Deposit will be used by the Town to retain professional services and/or contractors to conduct site alteration related work when the Owner/Operator is unwilling or unable to carry out the Conditions of an Order.
 - iv. Municipal Service Fee is to compensate the Town for the importation of fill from off-site; recognizing the impacts to the community related to the transportation and placement of fill from off-site.
 - v. Permit Renewal Fee to cover the costs of the Town's administrative staff to administer the renewal application and permitting process when there are no significant changes to a site alteration other than updating the work in progress and extending the approved period of activity. The Director will determine if a renewal application has significant changes from the initial application that would warrant a new application rather than a renewal.
 - vi. Site Alteration Violation and Investigation Fee to cover the additional work required to bring into compliance with the By-law, site alteration activities conducted without a valid Permit and/or Agreement.

9.3 Insurance

Comprehensive insurance is required to cover liability in an amount not less than \$5,000,000 per occurrence against all claims including personal injury, death, property damage and environmental damage resulting directly or indirectly from site alteration and fill activities, in which the policy shall include the Town as a named additional insured or insure as required by the Director based on site specific conditions. The insurance shall remain in place until the termination of all Agreements, Permits and Orders related to the site alteration.

A copy of the certificate of such insurance is required prior to Permit issuance. Upon renewal of an insurance policy, the Town must receive a copy of the renewed policy.

9.4 Pre-screening Questionnaire

The Application Form (Appendix D) requires the completion of a Pre-Screening Questionnaire by an appropriately qualified professional, licensed to practice in the province of Ontario such as a Professional Engineer, Professional Geoscientist or other similarly qualified professional. The qualified professional is required to review the background reports, Site Alteration and Fill Management Plan and other supporting technical documents submitted in support of the application and provide a declaration that the technical documents meet the requirements set out in the By-law.

9.5 Background Studies and Documents

The application must be supported by the provision of sufficient background studies and documentation prepared by appropriately qualified technical specialists to confirm compliance with other regulatory agencies with jurisdiction and provide any conditions imposed by those other agencies related to the site alteration including, but not limited to:

- a) Where the site is within the jurisdiction of the Oak Ridges Moraine Conservation Plan, provide all necessary documentation to demonstrate compliance with the Oak Ridges Moraine Conservation Plan;
- b) Where the site is within the jurisdiction of the Greenbelt Plan, provide all necessary documentation to demonstrate compliance with the Greenbelt Plan;
- c) Where the site is immediately adjacent to, or shares a common boundary with, an area under the jurisdiction of a Conservation

Authority, provide confirmation from the Conservation Authority that the site alteration meets their requirements and any site specific conditions imposed by the Conservation Authority;

- d) Where the site has previously been licensed by the Ministry of Natural Resources for Aggregate extraction, provide confirmation of the surrender of the license;
- e) Where the site is in an area of Mineral Aggregate Resources, provide a description of how the site alteration is consistent with Section 2.5 of Provincial Policy Statement 2014;
- f) Where the site is within the Regional Municipality of York and in a Wellhead Protection Area, Significant Groundwater Recharge Area or Highly Vulnerable Aquifer, as defined by the Region and Province, provide confirmation from the Region that the proposed site alteration meets their requirements and provide any site specific conditions imposed by the Region;
- g) Where the site alteration involves traffic and access via roads under the jurisdiction of the Regional Municipality of York, provide confirmation from the Region that the proposed traffic and road access components of the site alteration meets their requirements and provide any site specific conditions imposed by the Region;
- h) Where the site alteration has the potential to injure or destroy trees as outlined in the Regional Municipality of York By-law to prohibit or regulate the destruction or injuring of trees, provide confirmation from the Region that the proposed site alteration meets their requirements and provide any site specific conditions imposed by the Region.
- i) Where the site alteration has the potential to discharge a contaminant into any part of the natural environment, provide a copy of the Environmental Compliance Approval (ECA) from the Ministry of Environment or confirmation that an ECA is not required.
- j) Where the site alteration has the potential to generate noise, complete the Noise Screening Process for ECA Applications and evaluate the potential for noise as per NPC-300 (Environmental Noise Guideline). Provide a copy of the ECA or confirmation through an Acoustic Assessment that one is not required.
- k) Where the site alteration has the potential to result in unstable geotechnical conditions, provide a geotechnical assessment.
- l) Where the site alteration has the potential to disturb archaeological resources, conduct an Archaeological Assessment as required by the Ministry of Tourism, Culture and Sport (MTCS).

- m) Where the site is potentially on or adjacent to an area of Significant Natural Heritage, conduct an Environmental Impact Assessment (EIS) as per the requirements of the MNR and Conservation Authority.
- n) Where the site alteration will result in a change to a more sensitive land use as defined by O.Reg 153/04, as amended, provide a description prepared by a Qualified Person of how a Record of Site Condition will be obtained, as it will be a Permit and/or Agreement Condition for the completion of the site alteration.
- o) Provide a legal plan of the property and specify the location of the site alteration activities.
- p) Provide other background reports and documentation as required to support the application.

9.6 Site Alteration and Fill Management Plan

9.6.1 Preparation of a Plan

Anyone applying for a Permit shall provide a Site Alteration and Fill Management Plan (SA&FMP). The SA&FMP must detail current conditions, how the site alteration activities will be conducted, the final site conditions and the impact mitigation measures to be employed. The SA&FMP must be prepared by an appropriately qualified professional licensed in the province of Ontario and the Plan must be based on the background studies and site specific conditions of the property.

The scope and comprehensiveness of the SA&FMP is greatly dependent on the size and nature of the site alteration to be undertaken. Small site alterations with very little potential to impact surrounding lands or the environment will require a SA&FMP of limited scope and detail. Larger site alterations, especially those involving the importation of material from off-site and/or those with significant changes to grades, will require a more comprehensive SA&FMP. A template for a Site Alteration and Fill Management Plan is included in Appendix F.

The Site Alteration and Fill Management Plan will include the following (where applicable):

- a) Provide rationale regarding the purpose of the site alteration and its conformance with good engineering and scientific practices and how the site alteration will not degrade the environmental condition of the site or surrounding properties.

- b) Provide a work schedule for site alteration activities including:
- i. Proposed start date;
 - ii. Proposed end date; and
 - iii. A brief description of the timing of major activities such as completion of silt fencing and preparatory work, period of filling and final surface cover application.
- c) Provide the timing of the Site Alteration activities such that no activities occur, as a minimum:
- i. Between the hours of 7:00 p.m. and 7:00 a.m. Monday to Saturday;
 - ii. Anytime on a Sunday or Statutory Holiday;
 - iii. During any period in which a wind warning has been issued by Environment Canada;
 - iv. During any weather conditions where the ability to mitigate site alteration activity impacts is severely compromised (i.e., heavy rain, etc.); and
 - v. During any situation where site alteration activities can unduly impact adjacent landowners (i.e., brush fires, floods, unsuitable road conditions, etc.).
- d) Provide engineering drawings and cross-sections with sufficient topographic and site condition details to illustrate:
- Existing topography and conditions;
 - Existing surface water flow on and around the site;
 - Site alteration process;
 - Proposed final grades and conditions; and
 - Proposed final surface water flow on and around the site.
- e) Provide surface water flow conditions before, during, and after site alteration activities on and around the site including:
- Mitigation methods to be used to control erosion, sedimentation and surface water flow during the site alteration;
 - Impacts of the site alteration on surface water flow; and
 - Mitigation methods employed to ensure no significant deleterious impacts (blockage, siltation, contamination, flooding, increased runoff, etc.) to water courses and surrounding properties occur as a result of the site alteration.

- f) Provide an evaluation of the potential for the site alteration to impact groundwater on and around the site including:
- Existing groundwater conditions;
 - Groundwater sensitivities (i.e., well head protection area, aquifer vulnerability, source water protection, groundwater discharge areas, etc.);
 - Potential impacts to groundwater;
 - Mitigation methods; and
 - Monitoring and post site alteration confirmation of groundwater conditions.
- g) Provide sufficient documentation to demonstrate that the site alteration will not impact a groundwater well including:
- i. No site alteration activities to come within 3 metres of a well; or
 - ii. Provide a report from an appropriately qualified professional that the site alteration will not impact the well and/or the modifications to the well that will be conducted in accordance with O.Reg. 903; and
 - iii. Maintain drainage away from the well as required by O.Reg. 903.

In the case of a Large Site Alteration, conditions ii and iii above must be met.

- h) Provide sufficient documentation to demonstrate that the site alteration will not impact a septic system including:
- i. No site alteration activity to come within 3 metres of a septic system including the bed and reserve bed area; or
 - ii. Provide a report from an appropriately qualified professional that the site alteration will not impact the septic system and/or the modifications to the septic system that will be conducted in accordance with the Building Code; and
 - iii. Maintain the septic system capacity of the property in accordance with the Building Code or the Environmental Compliance Approval (if issued for the property).

In the case of a Large Site Alteration, conditions ii and iii above must be met.

- i) Provide sufficient documentation to demonstrate that the site alteration will not impact a house, building or other structure for which a Building Permit would be required to construct including:
 - i. No site alteration activities to come within 3 metres of a building or structure; or
 - ii. Provide a report from an appropriately qualified professional that the site alteration will not impact a building or structure and/or the modifications to the building and/or structure that will be undertaken in accordance with the Building Code to mitigate the impacts of the site alteration; and
 - iii. Maintain grading, drainage and geotechnical conditions in vicinity of all buildings and structures in accordance to the Building Code.

In the case of a Large Site Alteration, conditions ii and iii above must be met.

- j) Provide sufficient documentation to demonstrate that the site alteration will not impact adjacent properties including:
 - i. No site alteration activities to come within 5 metres of a neighbouring property; or
 - ii. Provide a report from an appropriately qualified professional that the site alteration will not impact neighbouring properties and note mitigative controls employed to ensure protection of neighbouring properties; and
 - iii. Where the site alteration will impact a neighbouring property, provide documentation of the neighbouring property owner's permission to carry out the activities proposed.

In the case of a Large Site Alteration, conditions of ii and iii above must be met.

- k) Where the site alteration will involve the importation of topsoil, soil or fill from off-site:
 - i. Apply Table 1: Full Depth Background Site Condition Standards for Agricultural or Other Property Use from the Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, as the default comparative criteria to evaluate the soil

being imported from off-site. All of the imported material must meet this criteria; or

- ii. Provide rationale in accordance with O.Reg. 153/04 and good engineering and scientific practices for the application of alternative soil quality criteria for consideration by the Director. Any deviation from the default soil quality criteria must be approved by the Director; and
 - iii. Provide rationale, in accordance with relevant Ministry of Environment Regulations (O.Reg. 153/04, O.Reg. 347, etc.) Best Management Practices and good engineering and scientific practices, if the imported materials are not topsoil, soil, rock, stone, clean concrete or sod, that the material is inert and geotechnically and environmentally suitable for the proposed purpose. The use of any inert fill material that is not topsoil, soil, rock, stone, clean concrete or sod must be approved by the Director.
- l) Provide a methodology of how any imported fill will be evaluated to ensure it meets the quality requirements established for the site including:
- Source site assessment by a Qualified Person;
 - Collection and analysis of samples of the fill material;
 - Evaluation of the material based on analytical results; and
 - Quality control/quality assurance procedures.
- m) Provide a methodology of how any imported fill will be documented and managed from source site to receiving site including:
- Bills of lading and tracking;
 - Receiving site assessment; and
 - Inspection and auditing.
- n) When importing or exporting fill from the site, provide a transportation plan in accordance with the requirements of the Town and Region to manage the traffic and access to and from the source site and the receiving site. The transportation plan must include:
- Haul routes;
 - Traffic control;
 - Traffic volume;
 - Road maintenance; and
 - Impacts and mitigation.

- o) For site alterations involving the transportation of materials on and off the site, provide a protocol for controlling mud and dust tracking on transportation routes to and from the site including:
- Method of monitoring mud and dust on roadways;
 - Mitigation methods such as access road paving, mud mats, wheel wash systems, etc.; and
 - Response plan to address mud and dust incidents such as maintaining a road sweeper on standby.
- p) For site alterations where airborne dust could impact neighbouring properties, provide protocol for controlling dust, including:
- Method of monitoring dust;
 - Mitigation methods to control dust (road watering, surface cover, etc.); and
 - Response plan to address dust incidents, such as, reducing traffic to limit dust generation and clean-up actions to address any impacts (window washing, car washing etc.).
- q) For site alterations requiring retaining walls, provide:
- Detailed engineering design; and
 - Appropriate Building Permits.
- r) For site alterations involving installation or alteration of any type of sub-surface drainage system, provide:
- Engineering drawings for the system; and
 - Inspection report from an appropriately qualified person prepared prior to covering.
- s) For site alterations that may harm trees, provide:
- Existing vegetation and tree details;
 - Proposed changes due to site alterations;
 - Mitigation methods to limit damage to trees;
 - Restoration plan; and
 - Where required, engage a qualified tree consultant.
- t) For site alterations that will result in a change to surface cover, provide:
- Existing grade and surface cover conditions;
 - Final grade and surface cover conditions;

- Mitigation methods employed to minimize impervious surfaces, maximize infiltration and enhance natural vegetation and conditions; and
 - Demonstrate that existing downstream conditions will be maintained or improved.
- u) For site alterations that could impact the public and adjacent landowners, provide:
- A mechanism for public and adjacent landowner liaison;
 - Identification of potential impacts (dust, noise, traffic, etc.);
 - Proposed mitigation methods; and
 - Complaint response and resolution protocol.
- v) For large site alterations that require the regular reporting of site activities, monitoring and calculation of imported fill volumes provide:
- Reporting program and schedule;
 - Monitoring program and schedule; and
 - Method of determining and reporting the volume of imported fill.
- w) For site alterations where there is the potential for illegal dumping and unauthorized access, provide a protocol for site security and access control.
- x) For site alterations where there is the potential for noise impacts to adjacent properties, provide:
- An assessment of potential noise impacts (machinery, tailgate banging, etc.);
 - Mitigation methods; and
 - A monitoring program to confirm compliance.
- y) For Large Site Alterations with the potential for public complaints, unexpected incidents, or a change in conditions, provide:
- A Risk Management Matrix;
 - Response and mitigation protocol;
 - An internal improvement protocol to reduce potential reoccurrences and;
 - A public consultation and liaison mechanism.

- z) For site alterations that will result in a post alteration change in land use as defined by O.Reg. 153/04, as amended, provide:
- Purpose and rationale of benefits of the change in land use; and
 - Documentation that the change in land use is consistent with Town zoning, the Oak Ridges Moraine Plan, O.Reg, 153/04, as amended, and the requirements of other agencies with jurisdiction; and
 - How a Record of Site Condition will be obtained if required by O.Reg. 153/04, as amended, and/or the Town.

9.6.2 Fill Quality Control, Environmental Protection, Monitoring and Oversight Flow Chart

The Site Alteration and Fill Plan (SA&FMP) must have integrated strategy for environmental protection based on the seven major components as shown in the figure in Appendix G, titled Fill Quality Control, Environmental Protection, Monitoring and Oversight.

As shown in the figure, there are successive layers of control and protective activities that are in place throughout the filling operation and post closure. The multiple layers of protection are designed to limit the potential for the importation of deleterious materials and ensure there is a robust process to address any issues at an early stage in the operation. The strategy involves assessment, documentation and certification by several professional parties and oversight of all aspects by the Town and their Peer Review Consultant. The process also includes compliance with the requirements of MOE, the primary regulatory authority with jurisdiction over the assessment and movement of fill materials. The process includes the following components:

- a) Oversight by the Owner/Operator of the Site;
- b) Assessment of the source site(s) and signed reports by the professional firm working on behalf of the source site Owner;
- c) Third Party Qualified Person (QP_{ESA}) review of Source Site documentation by a professional consulting firm retained by the Owner, who must approve the source site and dictate the quantity approved and any conditions;
- d) Owner staff inspection and sampling at the gate and tipping face as well as en route monitoring;
- e) Third party professional firm retained by Owner to conduct groundwater monitoring and reporting;

- f) Security Deposit posted and available to the Town for any issues of non-compliance or environmental impact;
- g) Town and their professional Peer Review Consultant to audit and oversee all aspects of the program; and
- h) York Region and other agencies with jurisdiction to provide oversight of specific areas of their mandate such as groundwater protection.

9.6.3 Regulatory Agencies with Jurisdiction

In addition to the requirements of the Town, the Agreement stipulates that the SA&FMP and site operations must be in compliance with the guidelines, regulations and requirements of all regulatory agencies with jurisdiction.

This would include:

- Ministry of Natural Resources (MNR)
 - Aggregate license closure requirements;
 - Fish and wildlife protection;
 - Forest and vegetation protection; and
 - Control of invasive species.
- Ministry of the Environment (MOE)
 - Management of the movement of fill;
 - Waste management (O.Reg. 347);
 - Environmental protection (soil, air, groundwater and surface water);
 - Contaminated sites and Brownfields Management (O.Reg. 153/04, as amended); and
 - Land use controls and designations.
- Regional Municipality of York (ROY)
 - Regional road control; and
 - Groundwater resource management (well head protection and groundwater quality protection)
- Conservation Authority (LSRCA and TRCA)
 - Wetlands;
 - Fish and fish habitat; and
 - Watershed management.
- Ministry of Transportation (MTO)
 - Traffic; and
 - Roads and highways.
- Police Services
 - Various police jurisdictions to enforce laws.
- Fire Services
 - Fire and emergency services.

The Town has jurisdiction for such things as:

- Oak Ridges Moraine Conservation Act;
- By-laws; and
- Various powers as dictated by the Municipal Act.

Each of the regulatory agencies has specific mandates and carries out their mandates with various requirements and approvals. They also have staff with various powers to exercise the authority of their mandate and in most cases this includes the ability to enter the site, request information and issue Orders to take action and/or impose penalties.

The Agreement requires, and the Site Alteration Permit is conditional upon, the continual compliance of all applicable laws and regulations.

The Site Alteration and Fill Management Plan must illustrate that site activities will maintain this compliance. The Owner is responsible for retaining any and all permits and requirements by other agencies with jurisdiction and operates in full compliance with such requirements.

The Agreement is made between the Owner and the Town. The Agreement includes, among other things, the content of the SA&FMP. The Agreement remains in place until the Town is satisfied that all aspects have been fulfilled. The Site Alteration and Fill Permit is issued for the period of one year for small site alterations with other durations possible at the discretion of the Town. For example, when the filling approaches the final approval contours for Large Site Alterations with an Agreement, the Permit does not expire but is subject to an annual review.

9.7 Sampling Frequency and Protocol for Imported Fill

9.7.1 Source Site Sampling Frequency

Each site alteration is unique, however, the requirements for sampling the imported soil must follow the current requirements and protocols established by the MOE, in particular O.Reg. 153/04, as amended.

The document "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", MOE December 1996, is the technical guidance document for assessment and sampling protocols.

Sampling frequency for imported material will be in accordance with the approach outlined in the MOE Guidance document and O.Reg. 153/04, as amended which also references this document.

The actual numbers of samples and the parameters analyzed will be developed by the QP_{ESA} in accordance with the MOE Guidance document and regulations as a minimum, as well as good engineering and scientific practices.

The selection of the number of samples begins after review of the source site Phase I ESA by the QP_{ESA}.

In some cases, the Phase I ESA may conclude that the potential source site does not require a Phase II ESA and could also conclude that a Record of Site Condition (RSC) could be filed based on the Phase I ESA alone. In this case, source site sampling is not necessary. However, the QP_{ESA} would elect to conduct some sampling to determine the natural soil chemistry and characteristics prior to confirming the appropriateness of the source site soil chemistry in comparison to the receiving site soil criteria.

In other cases, the Phase I ESA would recommend a Phase II ESA. Following completion of the Phase II ESA, some remedial action may be required to meet the property use standards for the potential source site. The QP_{ESA} is responsible for reviewing the Phase I ESA, Phase II ESA, recommendation reports, and other documents related to the potential source site. Based on the report review, the QP_{ESA} could approve or reject the potential source site. The QP_{ESA} could also require an additional sampling program at the completion of the potential source site assessment. The QP_{ESA} would determine the volume of soil that is approved for shipment from the source site to the receiving site and any conditions or restrictions that may be necessary to ensure that only the approved material is shipped. This could include inspection of the source site by the QP_{ESA} during shipment, or other control measures.

Source site sampling frequency will be based on the requirements of O.Reg. 153/04, as amended, and the MOE Guidance document, as well as any additional due diligence sampling as determined by the QP_{ESA}.

9.7.2 In Transit Sampling

Random sampling of material leaving the source site and in transit to the receiving site will be determined by the QP_{ESA} and the auditing procedures of the receiving site's audit protocol in their Site Alteration and Fill Management Plan. Transit

monitoring will focus on truck traffic control, manifests and random inspections; with actual load sampling conducted should there be a concern identified from the general auditing. The protocol will be to reject any load of suspicious origin or without appropriate documentation.

9.7.3 At the Gate Sampling

Sampling at the gate adds an additional layer of due diligence and auditing following the source site assessment and transit management protocols. Sampling at the gate is not designed to be the primary soil monitoring mechanism. The evaluation of soil quality is much more effective on site at the source site where the Phase I ESA and other documents can provide a more reliable assessment, including source site sampling and evaluation, than any detailed sampling program conducted at the gate of a receiving site. The site assessment process to evaluate soil quality is based on the long established, and MOE regulated, process of Phase I ESA, Phase II ESA and remedial action, if necessary (followed by Phase II ESA confirmation report). This is often completed by the filing of a Record of Site Condition, as required by regulation or by the requirements of other parties (municipalities, banks, etc.). In many cases, filing a RSC is not required, however, the environmental assessment process leading up to that point is the same.

The QP_{ESA} will evaluate the potential source site soil quality based on this established process with the addition of comparing the findings to the soil quality criteria of the receiving site. The QP_{ESA} will determine if additional source site sampling is required to ensure the source site soil is suitable for the receiving site. Sampling at the gate is for auditing and due diligence purposes and not designed to be a primary soil screening point. In no situation is soil from an unapproved source site allowed entry on the receiving site.

The due diligence soil sampling audit at the gate is designed to collect sufficient samples reflective of an audit. Determination of the number of samples is based on the number of source sites, number of loads, and the identification of any irregularities in the transit protocol.

Typical audit sampling frequency for a well-controlled operation bringing material from one or two well assessed source sites with no significant issues could be in the order of once per day conducted together with other inspection and evaluation protocols. The selection of audit sampling parameters would be based on the advice of the QP_{ESA} and include typical contaminant suites such as metals, inorganics, petroleum hydrocarbons and volatile organic compounds (VOCs).

Suggestions have been made that the audit sampling frequency be based on the frequency described in O.Reg. 153/04, as amended, for “Bringing Soil to a RSC Property”. These protocols were designed for situations where a few truckloads of topsoil or final grading fill are imported to a RSC site after the RSC is filed.

The frequency is based on limited source site evaluation and a small volume of imported material (i.e., less than 1,000 m³). Typically, if a site owner wanted to import larger quantities of fill to an RSC site, the owner would import the necessary amount of soil conducting necessary sampling considered by the QP_{ESA} to be the appropriate amount of due diligence sampling, and negate the existing RSC. Upon completion of the site alteration, the QP_{ESA} updates the Phase I ESA and Phase II ESA while following O.Reg. 153/04 requirements and then files a new RSC.

In most cases where a site alteration would involve importation of significant amounts of fill to a RSC site, the owner follows more appropriate sections of the regulations and refiles the RSC at the completion of the work, following the “Bringing Soil to a RSC Site” protocol.

The sampling frequency outlined in O.Reg. 153/04 regarding “Bringing Soil to a RSC Property”, if applied to large scale site alterations, may not be as effective as the source site assessment method of soil evaluation and actually provides a false sense of security. In any sampling program, there are two components:

- Sampling frequency; and
- Analytical parameters.

A soil assessment based blindly on sampling unknown soil, based on frequency, is an inappropriate approach which is out of compliance with regulations and good engineering and scientific protocols. Determination of potential contaminants of concern based on source site assessment and the selection of the appropriate suite of analytical parameters by the QP_{ESA} is of critical importance. In some situations the QP_{ESA} may require testing for parameters not listed in the MOE Standards, such as radiation, biological materials, as well as organic and inorganic compounds not listed in the Standards. Ontario regulation requires the QP_{ESA} to evaluate the potential for parameters not listed in the Standards and conduct the appropriate assessment and determine appropriate comparative site specific criteria. In some cases a Risk Assessment by a QP_{RA} (Risk Assessment) may be the appropriate regulatory compliant method to develop a Site Specific Standard (SSS).

9.7.4 On Site Audit Sampling

Audit sampling must be conducted at a frequency and for parameters selected by the QP_{ESA} of the emplaced fill at the receiving site, to supplement receiving site soil assessment protocols. This provides another layer of due diligence to the soil assessment protocols of the receiving site. Since the samples are collected on site, they can be used at a later date to support a Phase II ESA (which includes additional sampling) when conducted as part of the process to confirm site conditions to support the filing of a Record of Site Condition.

9.7.5 Fill Quality Centre, Environmental Protection, Monitoring and Oversight

Source Site Assessment and sampling protocols are part of the multi-layered quality control and environmental protection system as shown in the figure in Appendix G.

9.8 Soil Quality Criteria Selection

9.8.1 Overview

The most applicable soil quality comparative criteria for use during site alterations and filling is the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, MOE, April 15, 2011. These Standards are referenced in O. Reg. 153/04, as amended.

Although not specifically designed for use as imported fill soil assessment criteria for filling they are the best source of soil quality criteria for use by a QP to evaluate a specific site alteration situation. The Standards were created to be conservative and generic for a variety of environmental conditions (i.e., potable or non-potable ground water), and Property Uses (Agricultural, Residential, Industrial, etc.). The Standards were developed based on using a risk based approach as outlined in the MOE document “Rationale for the Development of Soil and Ground Water Standards for use at Contaminated Sites in Ontario” dated April 15, 2011. In addition to the Generic Standards Site Specific Standards can be derived through the Tier 2 and Tier 3 Risk Assessment approaches.

In any situation, the QP_{ESA} evaluates the actual site conditions and determines the applicable Generic Standards or, with the assistance of a QP_{RA} (Risk Assessment), develops risk based Site Specific Standards.

The Town has set the most stringent Standards as the Default Standards (Table 1) for the comparative criteria for imported fill soil. However, the Town recognizes the scientifically valid approaches acceptable to the MOE as outlined in O. Reg. 153/04, as amended and will consider on a case by case basis rationale to use Standards other than the Default Standards.

9.8.2 Table 1: Full Depth Background Site Condition Standards

The Table 1 Standards contained within the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, MOE, April, 15 2011, are the background values for Ontario's typical range values for the land uses indicated and are considered representative of upper limits of typical province-wide background concentrations in soils that are not contaminated by point sources.

In the absence of any site specific studies and site specific rationale developed by a QP_{ESA} and/or QP_{RA} in accordance with O. Reg. 153/04 methodology, the Table 1 Standards would be considered the default standards for evaluating the quality of imported soil during site alteration activities. Unless the current and future Property Use is known as per O. Reg. 153/04 the Default Property Use would be Agricultural or Other Property Use.

Any deviations from the Default Standards must be supported by scientific rationale and be approved by the Director.

9.8.3 Tables of Generic Site Condition Standards

When conducting environmental site assessments in accordance with O. Reg. 153/04, as amended, the Generic Standards in Tables 2 through 9 contained within the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, MOE, April 15, 2011, can be used based on Property Use and site specific conditions, to evaluate the environmental condition of a property. The QP_{ESA} can select the appropriate table of Standards based on such things as Property Use, potable or non-potable ground water, and proximity to a water body. The Generic Standards include both Full Depth and Stratified Standards. Stratified Standards provide values for surface soil and sub-surface soil below 1.5 m of final grade.

For any site alteration, the post alteration environmental condition of the property when evaluated in accordance with O. Reg. 153/04 as part of an environmental

policy changes and as regulatory agencies update their regulations and best practices guidelines. Input from the public and stakeholders will be incorporated along with feedback from those applying for a Site Alteration and Fill Permit and conducting site alteration and filling activities.

The By-Law and this Guideline and existing Best Management Practices, as well as recent initiatives by MOECC and other agencies have established industry practices for the management of fill operations that the Town expects to be followed. In addition to the information provided in the Town By-Law, the sourcing, assessment, transportation and placement of fill should be conducted in accordance with following documents:

- Management of Excess Soil -A Guide for Best Management Practices (BMP), MOECC, January 2014;
- Excess Soil Management Policy Framework, MOECC, December 2016;
- Proposed Excess Soil Regulatory Package -New Proposed Regulation and Amendments to Existing Regulations, MOECC, 2017; and
- Rationale Document for Reuse of Excess Soil at Receiving Sites, MOECC, 2017.

We recognize that the proposed regulations and amendments to regulations have not yet come into force however they offer guidance in support of the best management practices.

Qualified Person should prepare and submit to the Town a Fill Management Plan for the sourcing, transportation, and placement of fill on the site including in Subdivisions and Site Plans.

The Qualified Person will be required to certify the site and obtain a Letter of Acknowledgment of the Filing of a Record of Site Condition from the Ministry of Environment and Climate Change in full accordance with O. Reg. 153/04 for the land parcel for the applicable land use (If the land use is unknown, Table 2 Residential/Parkland/Institutional Property Use shall be used)

Appendix A

Site Alteration and Fill By-law 2017-017-RE

<https://whitchurch.civicweb.net/filepro/documents/114764?preview=115893>

Appendix B

Agreement Template

THIS AGREEMENT made this ___ day of _____, 201x.

B E T W E E N:

Owner

(hereinafter called "Owner")

- and -

**THE CORPORATION OF THE TOWN
OF WHITCHURCH-STOUFFVILLE**

(hereinafter called the "Town")

NOW WHEREAS Owner is the Owner of the property located in Part of Lot XX, Concession XX, Town of Whitchurch-Stouffville, as more particularly described in Schedule 'A' identified as Number and Street and hereafter referred to as the "Property" AND WHEREAS Owner will be responsible to co-ordinate and oversee site alteration and fill activities on the property;

AND WHEREAS the Town has enacted By-law No. 2017-017-RE (as amended from time to time) BEING A BY-LAW to prohibit or regulate, any alteration to the grade (topography) of land through the movement, removal or placement of topsoil, soil or fill within the Town of Whitchurch-Stouffville;

AND WHEREAS By-law 2017-017-RE s. X.X requires where 5,000 cubic metres or greater of site alteration is to be conducted on any property in any 12 month period, the Owner shall provide the information set out in the By-law and shall enter into an Agreement with the Town, approved by its Council;

AND WHEREAS Owner has requested the Town to issue a Site Alteration and Fill Permit to allow them to conduct site alteration and fill activities on their property in accordance with the By-law and a Site Alteration and Fill Management Plan dated MONTH DAY, YEAR and as may be further revised to the satisfaction of The Regional Municipality of York (hereinafter called the "Region"), other regulatory agencies with jurisdiction and the Town has mutually agreed upon in writing, as detailed in Schedule 'B'.

AND WHEREAS Owner has requested the Town issue a Site Alteration and Fill Permit based on the importation of a maximum of XXX cubic metres of approved fill and the Owner has agreed not to exceed this amount;

AND WHEREAS Owner has agreed not to contaminate or cause deleterious impacts on the natural environment or adjacent properties and agrees to abide by all applicable environmental laws and regulations including the Site Alteration and Fill By-law 201X-XXX-RE as may be amended;

AND WHEREAS Owner agrees as a Condition of issuing a Site Alteration and Fill Permit that Owner will pay the Application Fee and provide the Cash Deposit and Security Deposit calculated in accordance with the User Fee By-law as may be amended from time to time and detailed in Schedule 'D'.

AND WHEREAS Owner agrees to pay the Municipal Services Fee calculated in accordance with the Town's User Fee By-law, as may be amended.

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of good and valuable consideration and the payment of the sum of Two Dollars (\$2.00) by each party to the other, the parties hereto covenant, promise and agree with each other as follows:

1. The lands, that make up the Property that is the subject of this Agreement are located in Part of Lot XX, Concession XX, Town of Whitchurch-Stouffville, as more particularly described in Schedule 'A' identified as **Number and Street**.
2. Owner agrees to follow the details of the Site Alteration and Fill Management Plan prepared in accordance to By-law 2017-017-RE, as may be amended, and in compliance with the requirements of the Region, Conservation Authority and all applicable federal and provincial laws as outlined in the Site Alteration and Fill Management Plan in Schedule 'B'.
3. Owner hereby agrees to indemnify and save harmless the Town from any action, claim, damages or loss whatsoever which may arise in connection with the matters dealt with in the Agreement, including, without limiting the generality of the foregoing, any liabilities arising out of the site alterations and fill activities conducted on the Property or for the Town enforcing any of its By-laws or requiring compliance from the Owner, in accordance with the Site Alteration and Fill Management Plan.
4. Owner hereby agrees to take out and keep in force throughout the term of this Agreement comprehensive insurance to cover liability in an amount not less than \$5,000,000 per occurrence against all claims including personal injury, death, property damage and environmental damage resulting directly or indirectly from the site alteration and fill activities on the property, which policy shall include the Town as a named additional insured. Owner shall provide the Town a certificate evidencing such insurance coverage prior to the Town issuing the Site Alteration and Fill Permit. A copy is included in Schedule "D".
5. Owner agrees to pay any and all reasonable costs which the Town may incur relating to any inspection, monitoring and auditing of the site alteration and fill activities and the Town's administration costs. Owner also agrees to pay all reasonable costs fees of the Town to prepare and administer this Agreement and the review of technical reports and drawings submitted in support of the Site Alteration and Fill Permit application and the peer review costs of the Town in accordance with the Agreement. The Town will draw on the Cash Deposit outlined in Schedule 'C' on a monthly basis for such inspection and review costs, in accordance with the Fee By-law, and Owner will top up the cash account within 30 days of the request being received from the Town. Owner acknowledges that the Town may issue Order to stop work if payment of any applicable fees and/or deposits is not received by the end of the 30 day request and Owner will abide by the Order and not seek any damages.
6. Prior to issuance of the Site Alteration and Fill Permit, Owner shall provide a Security Deposit in accordance with the Fees and Charges By-law, as detailed in Schedule C, to allow the Town to access funds for various purposes and contingencies in accordance with the Permit and Agreement. The amount deposited in each year shall be \$50,000.00 plus \$0.40 per cubic metre of cut and fill site alteration volume from the previous year (in the first year this amount shall be calculated based on the estimated cut and fill site alteration volume for that year), provided that the cumulative total Security Deposit maintained by the Town shall not exceed \$1,000,000.00. If the Town draws upon the Security Deposit, the Owner will top up the Security Deposit within 30 days of the request being received from the Town.
7. Prior to issuance of the Site Alteration and Fill Permit, Owner agrees to obtain all necessary approvals, permits and acknowledgements from all other agencies with jurisdiction (Conservation Authority, Region, provincial and federal, etc.) to the satisfaction of the Town.
8. Owner agrees to pay the Town the Municipal Services Fees, as set out in By-law No. 2013-171-FI, as may be amended/replaced from time to time, for each cubic metre of fill imported to the Property. Payments to be made as a minimum in quarterly installments based on the volume of fill imported during the previous

quarter. The calculation of fill volumes to be based on topographic surveys and truck counts (or similar methodology). The calculation for the fourth quarter of the year must be based on a topographic survey conducted within two weeks of the end of the quarter. Discrepancies from previous volume calculations and payments will be rectified and adjusted at this time. Imported fill volume tracking will be managed as outlined in the Site Alteration and Fill Management Plan in Schedule 'B'.

9. Owner agrees that Site Alteration activities will not commence prior to issuance of a Site Alteration and Fill Permit as provided for in By-law 2017-017-RE, as amended and until has met all of the Conditions of this Agreement.
10. Owner agrees that the Site Alteration and Fill Permit issued by the Town will not be issued with an expiry date unless specified by the Director. This, however, will be contingent upon compliance with the Conditions of the Agreement, the Permit, Orders and the Site Alteration and Fill Management Plan.
11. The Owner agrees to provide the required reports and documents a minimum of three months prior to the anniversary date of the issuance of the Permit to allow the Town to conduct an annual review of the site alteration and fill activities, to determine compliance with the Permit and Agreement.

to the Town at:

The Corporation of the Town of Whitchurch-Stouffville
111 Sandiford Drive,
Stouffville, Ontario L4A 0Z8

Attn: DIRECTOR'S NAME, Director of Development Services
Fax: (905) 640-7957

to Owner at:

Owner Inc.
xxxxx
xxxxxx, Ontario
Attn: Contact Person

Fax: xxx-xxx-xxxx

12. The Town may revoke the Site Alteration and Fill Permit upon failure by Owner to comply with any of the provisions of the Agreement, Permit, Orders and Site Alteration and Fill Management Plan, provided that the Director shall first give notice in writing to Owner of any failure to comply, provide at least 30 days thereafter to enable Owner to remedy such failure, and an opportunity for Owner to make representation before the Town prior to revoking the Permit and further provided that any remedy of a breach by Owner pursuant to this section or otherwise shall not inhibit or limit the Town's authority to revoke the Permit pursuant to this section. This Agreement will remain in full force should the Site Alteration and Fill Permit be revoked or expire and Owner agrees to immediately begin site closure as outlined in the Site Alteration and Fill Management Plan, complete any remedial corrective work required by the Town, and complete the post closure care and monitoring or other works as outlined in the Site Alteration and Fill Management Plan. The Agreement will be considered terminated after all Terms and Conditions have been fulfilled and with the approval of Council.
13. Owner agrees that if for whatever reason the Permit is not renewed, this Agreement will remain in full force and Owner agrees to immediately begin site closure and other actions as outlined in the Site Alteration and Fill Management Plan, complete any remedial corrective work required by the Town, and complete the post closure care and monitoring or other works as outlined in the Site Alteration and Fill Management Plan. The Agreement will be considered

terminated after all Terms and Conditions have been fulfilled and with the Approval of Council. All notices, demands or requests shall be deemed to have been properly given if delivered personally or sent by prepaid registered mail or facsimile transmission to the addresses set out in this Agreement. If notice is given by prepaid registered mail, the same shall be effective five (5) business days upon being deposited with the post office, or upon proof of delivery by return receipt. However, in the event of the interruption of postal services, the notice shall not be deemed to have been given during such period of interruption, unless a notice has been actually delivered personally.

- 14. Owner agrees that the Town has jurisdiction to enter into this Agreement and that it will not challenge the validity of any of the terms of this Agreement or attempt to seek recovery of any of the payments made pursuant to this Agreement in any court or tribunal. Owner agrees that it entered into this Agreement voluntarily and on the advice of legal counsel.
- 15. This agreement shall be binding upon the parties hereto and their successors and assigns.
- 16. All notices, demands or requests provided for or permitted to be given pursuant to this Agreement shall be made in writing as follows:
- 17. The following Schedules are considered part of this Agreement.
 - Schedule A - Property Details
 - Schedule B – Site Alteration and Fill Management Plan
 - Schedule C – Application Fee, Cash Deposit, Security Deposit
 - Municipal Services Fees with payment schedule.
 - Schedule D – Certificate of Insurance

IN WITNESS WHEREOF Owner and the Town have hereunto set their hands and seals, attested to by the hands of their proper signing officers duly authorized in that behalf.

Dated at Stouffville, this _____ day of _____, 201X

SIGNED, SEALED AND DELIVERED)	Owner Inc.
)	
)	_____
)	xxxxxxx
)	
)	_____
)	xxxxxxx
)	
)	
)	THE CORPORATION OF THE TOWN
)	OF WHITCHURCH-STOUFFVILLE
)	
)	_____
)	Justin Altmann, Mayor
)	
)	
)	_____
)	Gillian Angus-Trail, Clerk

Schedule 'A'

Part of Lot XX Concession XX
Municipally identified as Number and Street
Town of Whitchurch-Stouffville

Schedule 'B'

Site Alteration and Fill Management Plan

Schedule 'C'

Application Fee, Cash Deposit, Security Deposit
and Municipal Services Fees with Payment Schedule

Schedule 'D'

Certificate of Insurance

Appendix C

Site Alteration and Fill Permit Template

Final Version August 11 2014

**SITE ALTERATION AND FILL PERMIT
 ISSUED BY THE ENGINEERING DEPARTMENT
 INACCORDANCE WITH BY-LAW #2017-017-RE**

Permit # 15-01

Site Address:	Number and Street
Legal Description:	Lot and Concession, Part Lot, Plan Number
Owner:	Name & Contact Information
Operator:	Name & Contact Information
Total Approved Site Alteration Volume	___m ³
Issued Date:	June XX, 2014
Expiry Date:	June XX, 2014
Approved By:	
Name: _____	
Title: _____	
Signature: _____	
Permit Terms and Conditions are outlined on the following page.	

<p>Site Alterations and Fill Permit #14-01 Terms and Conditions</p> <p>This Alteration and Fill Permit is only valid for the Site Address and Owner/Operator identified, the total volume specified and for the period specified and when in compliance with the following Terms and Conditions:</p>	
<ul style="list-style-type: none"> • Site Alteration and Fill Agreement (if applicable) dated: 	<ul style="list-style-type: none"> • A copy is available on the Town's Website http://www.townofws.ca/en/business/permits-and-licenses.asp?
<ul style="list-style-type: none"> • Site Alteration and Fill Plan dated: 	<ul style="list-style-type: none"> • A copy is available on the Town Website http://www.townofws.ca/en/business/permits-and-licenses.asp?
<ul style="list-style-type: none"> • Additional Documentation dated: 	<ul style="list-style-type: none"> • A copy is available on the Town Website http://www.townofws.ca/en/business/permits-and-licenses.asp?
<ul style="list-style-type: none"> • Site Specific Conditions dated: 	<ul style="list-style-type: none"> • A copy is available on the Town Website http://www.townofws.ca/en/business/permits-and-licenses.asp?
<p>The Owner/Operator agrees to abide by all Terms and Conditions set out in the Permit, Agreement (if applicable) and Orders (if issued). The Owner/Operator will, both during and following the term of this Permit indemnify and save harmless the Corporation of the Town of Whitchurch-Stouffville from all costs, losses, damages, judgments, claims, demands, suits, actions, complaints or other proceedings in any manner based upon, occasioned by or attributable to anything done or omitted to be done by the Owner/Operator, its directors, officers, employees, agents, subcontractors or volunteers in connection with activities pursuant to this Permit</p>	
<p>Owner/Operator Name:</p>	
<p>Signature:</p>	
<p>Contacts</p>	
<p>Town of Whitchurch-Stouffville</p>	
<p>Engineering Department</p>	<p>By-law Enforcement</p>
<p>(905) 640-1900 or (905) 895-2423</p>	<p>(905) 640-1910 ext. 2224</p>
<p>111 Sandiford Drive, Stouffville, ON L4A 0Z8</p>	<p>111 Sandiford Drive, Stouffville, ON L4A 0Z8</p>
<p>http://www.townofws.ca/en/residents/filling-site-alteration.asp</p>	<p>http://www.townofws.ca/en/town-hall/clerks-by-law-enforcement.asp</p>

Appendix D

Application Form

PLANNING AND DEVELOPMENT SERVICES DEPARTMENT

111 SANDIFORD DRIVE
 STOUFFVILLE, ON, L4A 0Z8
 TEL: 905-640-1900 OR 905-895-2423
 FAX: 905-640-7957

APPLICATION FOR SITE ALTERATION AND FILL PERMIT
 Pursuant to the Town of Whitchurch-Stouffville By-law No. 2017-017-RE

Please complete all applicable sections. An incomplete application will not be processed.

PROPERTY INFORMATION	
Address (Street and Number):	
Lot and Concession No.:	Lot/Block No.:
Roll No:	19TM No.:
OWNER'S INFORMATION AND AUTHORIZATION	
Name:	
Address:	
Tel:	Cell:
Fax:	E-mail:
<p>If there is more than one owner or if ownership is in the name of a corporation, the signatory must have the authority to sign on behalf of the other owners or bind the corporation.</p> <p>The undersigned being the registered owner (or authorized representative of the owner(s)) of the subject property hereby submit this application for a Site Alteration and Fill Permit pursuant to By-law 2017-017-RE, or authorize the below named Applicant to make a Site Alteration and All Permit Application for the subject property with my full knowledge and agreement.</p>	
Signature:	Date:
Printed Name:	Title:
APPLICANT (IF DIFFERENT FROM OWNER) INFORMATION AND AUTHORIZATION	
Name:	
Address:	
Tel:	Cell:
Fax:	E-mail:
<p>The undersigned, with the permission of the owner(s) of the subject property, hereby submit this application for a Site Alteration and Fill Permit pursuant to By-law 2017-017-RE.</p>	
Signature:	Date:
Printed Name:	Title:

PROPOSED SITE ALTERATION AND FILL ACTIVITIES		
Proposed start date:		Proposed completion date:
Estimated cut in m³:	Estimated fill in m³:	Total Cut and fill in m³:
A total cut and fill volume of less than 200 m ³ in any 12 month period does not require a Permit. A total cut and fill volume of 5,000 m ³ or greater will require an Agreement approved by Council.		
Briefly describe the reason for conducting the site alteration and fill activities. What is the end purpose?		
FEES AND DEPOSITS AS PER USER FEE BY-LAW		
Application Fee Amount: \$	11-20-220-8135 (ENGFI)	
Cash Account: \$	11-00-000-0525	
Security Deposit: \$ <input type="checkbox"/> Cash <input type="checkbox"/> Letter of Credit <input type="checkbox"/> Required Prior to Permit Issuance	11-00-000-0525	
Municipal Service Fee: \$ <input type="checkbox"/> Required Prior to Permit Issuance	11-03-039-8136	
INSURANCE		
Certificate of Liability and Environmental Insurance (minimum \$5,000,000) or as specified by the Director – Attach copy		
SUPPORTING DOCUMENTS AND INFORMATION		
Attach hard copies and/or digital copies of all supporting documentation. Refer to the Site Alteration and Fill By-law for the information required to support a Permit Application.		
Provide a Site Alteration and Fill Plan (including, as required):		
<ul style="list-style-type: none"> – Topographic surveys; – Engineering drawings; – Fill source assessment; – Material movement and handling; – Surface water control; – Environmental impact mitigation; 	<ul style="list-style-type: none"> – Traffic control and mud tracking on roads; – Operating hours; – Dust and noise control; – Closure and restoration; – Post closure care and monitoring; and – Groundwater monitoring. 	
Provide Background studies and reports (as required):		
<ul style="list-style-type: none"> – Archeological; – Geotechnical; – Environmental impact assessment; – Surface water assessment; – Hydrogeological assessment; 	<ul style="list-style-type: none"> – Noise and air quality assessment; – Trees and vegetation assessment; and – Assessment of the need for a Record of Site Condition due to a land use change as per O.Reg. 153/04, as amended. 	
Provide responses from all other regulatory agencies with jurisdiction and copies of any permits, approvals or conditions imposed by those agencies directly related to the proposed site alteration.		
Provide other relevant information as required.		

PRE-SCREENING QUESTIONNAIRE	
This questionnaire must be completed and signed by an appropriately qualified person licensed to practice in the Province of Ontario such as a Professional Engineer or Professional Geoscientist, etc.	
The undersigned has reviewed the requirements of Town By-law 2017-017-RE and has reviewed the details of this Site Alteration and Fill Permit Application and the supporting technical documentation. In my professional opinion, the application and documentation fulfills the requirements of the Site Alteration and Fill By-Law 2017-017-RE.	
Name:	
Signature:	
Qualifications:	
Company Name:	
Address:	
Phone:	Cell:
Fax:	Email:

FOR OFFICE USE ONLY	
Completed Application Received by:	Date:
Property Management System Entry by:	Date:
File/Tracking Number:	
Comments:	

Appendix E

**Site Alteration Section of Fees and Charges By law 2016-0164-FI
As may be amended from time to time**

<https://whitchurch.civicweb.net/filepro/documents/104774?preview=114431>

Appendix F

Template for a Site Alteration and Fill Management Plan (SA&FMP)

Version August 25, 2014
Template for a Site Alteration and Fill Management Plan
As may be amended from time to time

1.0 Introduction

The Corporation of the Town of Whitchurch-Stouffville's Site Alteration and Fill By-law 2017-017-RE requires in Section 4.6 a Site Alteration and Fill Management Plan (SA&FMP).

The scope and detail of a SA&FMP will be greatly dependent on the size and scope of the proposed site alteration, and the unique characteristics of the subject property, and the relationship to adjacent land uses and activities.

Small site alterations (200 m³ to 4,999 m³) that do not have significant potential to impact the environment or adjacent properties will require a very brief Plan, while Larger Site Alterations (5,000 m³ or greater) will require a very detailed and sophisticated Plan.

Every site and situation is different. This template is designed to assist applicants of both small and large site alterations.

2.0 Who Should Prepare a Site Alteration and Fill Management Plan

Site alterations have the potential of requiring multi-disciplinary expertise, such as engineering, geoscience and other environmental specialities.

The Application for a SA&FMP requires the completion of a Pre-screening Questionnaire by an appropriately qualified professional licenced to practice in Ontario. This type of expertise should be engaged to prepare a SA&FMP.

A SA&FMP should be prepared by a person with the appropriate expertise that determine the site specific issues associated with particular site alteration and determine the required scope and content of a SA&FMP.

3.0 Content of the Site Alteration and Fill Management Plan (SA&FMP)

A suitably qualified professional should review the current conditions of the site and the proposed site alteration in order to determine the nature and scope of a SA&FMP.

Rationale must be provided as to why the SA&FMP is scoped to include some items, but exclude others. The following section provides a list of items to be considered when preparing a SA&FMP. Rationale must be provided as to what items are relevant and what items are not with respect to a proposed site alteration.

3.1 Agencies with Jurisdiction

3.1.1 General Prohibitions and Exclusions

Section 2.0 General Prohibitions and 3.0 Exclusions of the By-law should be reviewed to confirm a Site Alteration and Fill Permit is required and that the proposed site alteration is not prohibited.

3.1.2 Background Studies and Documents

Section 4.5 of the By-law outlines the background studies and documents that may be required to support a Permit application and the preparation of a SA&FMP. Various agencies with jurisdiction are identified including:

- Conservation Authorities (LSRCA and TRCA);
- Ministry of Natural Resources (MNR);
- Regional Municipality of York (York);
- Ministry of Environment (MOE);
- Ministry of Tourism Culture and Sport (MTSC); and
- Other provincial and federal agencies.

The jurisdiction of the other agencies must be determined and any conditions or constraints imposed by these agencies must be identified.

4.0 Site Alteration and Fill Management Plan

4.1 Purpose of the Site Alteration

Provide rationale regarding the purpose of the site alteration and its conformance with good engineering and scientific practices and how the site alteration will not degrade the environmental condition of the site or surrounding properties.

Anyone applying for a Permit shall provide a Site Alteration and Fill Management Plan (SA&FMP). The SA&FMP must outline in detail current conditions, how the site alteration activities will be conducted, the final site conditions and the impact mitigation measures to be employed. The SA&FMP must be prepared by an appropriately qualified professional licensed in the province of Ontario and be based on the background studies and site specific conditions of the property.

The scope and comprehensiveness of the SA&FMP is greatly dependent on the size and nature of the site alteration to be undertaken. Small site alterations with very little potential to impact surrounding lands or the environment will require a SA&FMP of limited scope and detail. Large site alterations, especially those involving the importation of material from off-site and significant changes to grades, will require a more comprehensive SA&FMP.

4.2 Rationale

Provide rationale regarding the purpose of the site alteration and its conformance with good engineering and scientific practices and how the site alteration will not degrade the environmental condition of the site or surrounding properties.

4.3 Schedule

Provide a work schedule for site alteration activities including:

- i. Proposed start date;
- ii. Proposed end date; and
- iii. A brief description of the timing of major activities such as completion of silt fencing and preparatory work, period of filling and final surface cover application.

4.4 Timing

Provide the timing of the Site Alteration activities such that no activities occur, as a minimum:

- iv. Between the hours of 7:00 p.m. and 7:00 a.m. Monday to Saturday;
- v. Anytime on a Sunday or Statutory Holiday;
- vi. During any period in which a wind warning has been issued by Environment Canada;
- vii. During any weather conditions where the ability to mitigate site alteration activity impacts is severely compromised (i.e., heavy rain, etc.); and
- viii. During any situation where site alteration activities can unduly impact adjacent landowners (i.e., brush fires, floods, unsuitable road conditions, etc.).

4.5 Drawings and Cross Sections

Provide engineering drawings and cross-sections with sufficient topographic and site condition details to illustrate:

- Existing topography and conditions;
- Existing surface water flow on and around the site;
- Site alteration process;
- Proposed final grades and conditions; and
- Proposed final surface water flow on and around the site.

4.6 Surface Water Flow and Impact

Provide surface water flow conditions before, during, and after site alteration activities on and around the site including:

- Mitigation methods to be used to control erosion, sedimentation and surface water flow during the site alteration;
- Impacts of the site alteration on surface water flow; and
- Mitigation methods employed to ensure no significant deleterious impacts (blockage, siltation, contamination, flooding, increased runoff, etc.) to water courses and surrounding properties occur as a result of the site alteration.

4.7 Groundwater

Provide an evaluation of the potential for the site alteration to impact groundwater on and around the site including:

- Existing groundwater conditions;
- Groundwater sensitivities (i.e., well head protection area, aquifer vulnerability, source water protection, groundwater discharge areas, etc.);
- Potential impacts to groundwater;
- Mitigation methods; and
- Monitoring and post site alteration confirmation of groundwater conditions.

4.8 Wells

Provide sufficient documentation to demonstrate that the site alteration will not impact a groundwater well including:

- i. No site alteration activities to come within 3 metres of a well; or
- ii. Provide a report from an appropriately qualified professional that the site alteration will not impact the well and/or the modifications to the well that will be conducted in accordance with O.Reg. 903; and
- iii. Maintain drainage away from the well as required by O.Reg. 903.

In the case of a Large Site Alteration, conditions ii and iii above must be met.

4.9 Septic Systems

Provide sufficient documentation to demonstrate that the site alteration will not impact a septic system including bed and reserve bed area including:

- i. No site alteration activity to come within 3 metres of a septic system including the bed and reserve bed area; or
- ii. Provide a report from an appropriately qualified professional that the site alteration will not impact the septic system and/or the modifications to the septic system that will be conducted in accordance with the Building Code; and
- iii. Maintain the septic system capacity of the property in accordance with the Building Code or the Environmental Compliance Approval (if issued for the property).

In the case of a Large Site Alteration, conditions ii and iii above must be met.

4.10 Buildings and Structures

Provide sufficient documentation to demonstrate that the site alteration will not impact a house, building or other structure for which a Building Permit would be required to construct including:

- i. No site alteration activities to come within 3 metres of a building or structure; or
- ii. Provide a report from an appropriately qualified professional that the site alteration will not impact a building or structure and/or the modifications to the building and/or structure that will be undertaken in accordance with the Building Code to mitigate the impacts of the site alteration; and
- iii. Maintain grading, drainage and geotechnical conditions in vicinity of all buildings and structures in accordance to the Building Code.

In the case of a Large Site Alteration, conditions ii and iii above must be met.

4.11 Adjacent Properties

Provide sufficient documentation to demonstrate that the site alteration will not impact adjacent properties including:

- i. No site alteration activities to come within 5 metres of a neighbouring property; or
- ii. Provide a report from an appropriately qualified professional that the site alteration will not impact neighbouring properties and note mitigative controls employed to ensure protection of neighbouring properties; and

- iii. Where the site alteration will impact a neighbouring property provide documentation of the neighbouring property owner's permission to carry out the activities proposed.

In the case of a Large Site Alteration, conditions ii and iii above must be met.

4.12 Fill Quality Criteria

Where the site alteration will involve the importation of topsoil, soil or fill from off-site:

- i. Apply Table 1: Full Depth Background Site Condition Standards for Agricultural or Other Property Use from the Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, as the default comparative criteria to evaluate the soil being imported from off-site. All of the imported material must meet this criteria; or
- ii. Provide rationale in accordance with O.Reg. 153/04 and good engineering and scientific practices for the application of alternative soil quality criteria for consideration by the Director. Any deviation from the default soil quality criteria must be approved by the Director; and
- iii. Provide rationale, in accordance with relevant Ministry of Environment Regulations (O.Reg. 153/04, O.Reg. 347, etc.) Best Management Practices and good engineering and scientific practices, if the imported materials are not topsoil, soil, rock, stone, clean concrete or sod, that the material is inert and geotechnically and environmentally suitable for the proposed purpose. The use of any inert fill material that is not topsoil, soil, rock, stone, clean concrete or sod must be approved by the Director.

4.13 Fill Quality Evaluation and Assessment

Provide a methodology of how any imported fill will be evaluated to ensure it meets the quality requirements established for the site including:

- Source site assessment by a Qualified Person;
- Collection and analysis of samples of the fill material;
- Evaluation of the material based on analytical results; and
- Quality control/quality assurance procedures.

4.14 Fill Tracking

Provide a methodology of how any imported fill will be documented and managed from source site to receiving site including:

- Bills of lading and tracking;
- Receiving site assessment; and
- Inspection and auditing.

4.15 Traffic to and from Site

When importing or exporting fill from the site, provide a transportation plan in accordance with the requirements of the Town and Region to manage the traffic and access to and from the source site and the receiving site. The plan must include:

- Haul routes;
- Traffic control;

- Traffic volume;
- Road maintenance; and
- Impacts and mitigation.

4.16 Mitigation of Mud and Dust on Roads

For site alterations involving the transportation of materials on and off the site, provide a protocol for controlling mud and dust tracking on transportation routes to and from the site including:

- Method of monitoring mud and dust on roadways;
- Mitigation methods such as access road paving, mud mats, wheel wash systems, (etc.); and
- Response plan to address mud and dust incidents such as maintaining a road sweeper on standby.

4.17 Dust Control

For site alterations where airborne dust could impact neighbouring properties provide protocol for controlling dust, including:

- Method of monitoring dust;
- Mitigation methods to control dust (road watering, surface cover, etc.); and
- Response plan to address dust incidents, such as, reducing traffic to limit dust generation and clean-up actions to address any impacts (window washing, car washing etc.).

4.18 Retaining Walls

For site alterations requiring retaining walls provide:

- Detailed engineering design; and
- Appropriate Building Permits.

4.19 Sub-surface Drainage

For site alterations that will involve the installation or alteration of any type of sub-surface drainage system provide:

- Engineering drawings for the system; and
- Inspection report from an appropriately qualified person prepared prior to covering.

4.20 Protection of Trees

For site alterations that may harm trees provide:

- Existing vegetation and tree details;
- Proposed changes due to site alterations;
- Mitigation methods to limit damage to trees;
- Restoration plan; and
- Where required, engage a qualified tree consultant.

4.21 Final Surface Cover and Grades

For site alterations that will result in a change to surface cover provide:

- Existing grade and surface cover conditions;
- Final grade and surface cover conditions;
- Mitigation methods employed to minimize impervious surfaces, maximize infiltration and enhance natural vegetation and conditions; and
- Demonstrate that existing downstream conditions will be maintained or improved.

4.22 Public and Adjacent Land Owners

For site alterations that could impact the public and adjacent landowners provide:

- Identification of potential impacts (dust, noise, traffic, etc.);
- Proposed mitigation methods; and
- Complaint response and resolution protocol.

4.23 Reporting

For large site alterations that require the regular reporting of site activities, monitoring and calculation of imported fill volumes provide:

- A mechanism for public and adjacent landowner liaison;
- Reporting program and schedule;
- Monitoring program and schedule; and
- Method of determining and reporting the volume of imported fill.

4.24 Site Control

For site alterations where there is the potential for illegal dumping and unauthorized access, provide a protocol for site security and access control.

4.25 Noise Impacts

For site alterations where there is the potential for noise impacts to adjacent properties, provide:

- An assessment of potential noise impacts (machinery, tailgate banging, etc.);
- Mitigation methods; and
- A monitoring program to confirm compliance.

4.26 Public Complaints and Incidents

For Large Site Alterations with the potential for public complaints, unexpected incidents, or a change in conditions provide:

- A Risk Management Matrix;
- Response and mitigation protocol;
- An internal improvement protocol to reduce the potential for reoccurrences; and
- A public consultation and liaison mechanism.

4.27 For site alterations that will result in a post alteration change in landuse as defined by O.Reg. 153/04, as amended provide:

- Purpose and rationale of benefits of the change in landuse; and;
- Documentation that the change in landuse is consistent with Town zoning, the Oak Ridges Moraine Plan, O.Reg, 153/04, as amended and the requirements of other agencies with jurisdiction, and;
- How a Record of Site Condition will be obtained if required by O.Reg. 153/04, as amended and/or the Town.

5.0 Summary

5.1 Scope of Site Alteration and Fill Management Plans

Each site alteration is different. The SA&FMP should provide the level of detail required to allow engineering and scientific reviewers to understand the activities to be undertaken, the potential impacts and mitigation strategies. The SA&FMP should clearly outline what items are relevant to the particular site alteration and what items are not relevant.

5.2 Site Alteration and Fill Management Plan Updates

5.2.1 Small Site Alterations

For small site alterations the Site Alteration and Fill Management Plan will be a fairly straight forward document and significant changes or deviations from the plan would not be expected. Should a situation arise that requires a significant modification to the SA&FMP the Town must be notified and an updated SA&FMP submitted for approval and an amendment to the Permit. Failure to comply with the Conditions of a Permit (which would include the content of the SA&FMP) could lead to Orders, Revocation of the Permit and/or fines.

5.2.2 Large Site Alterations

The Permit for Large Site Alterations where there is an Agreement may not have an expiry date, however the Town will conduct an annual review to determine compliance with the Conditions of the Permit and Agreement.

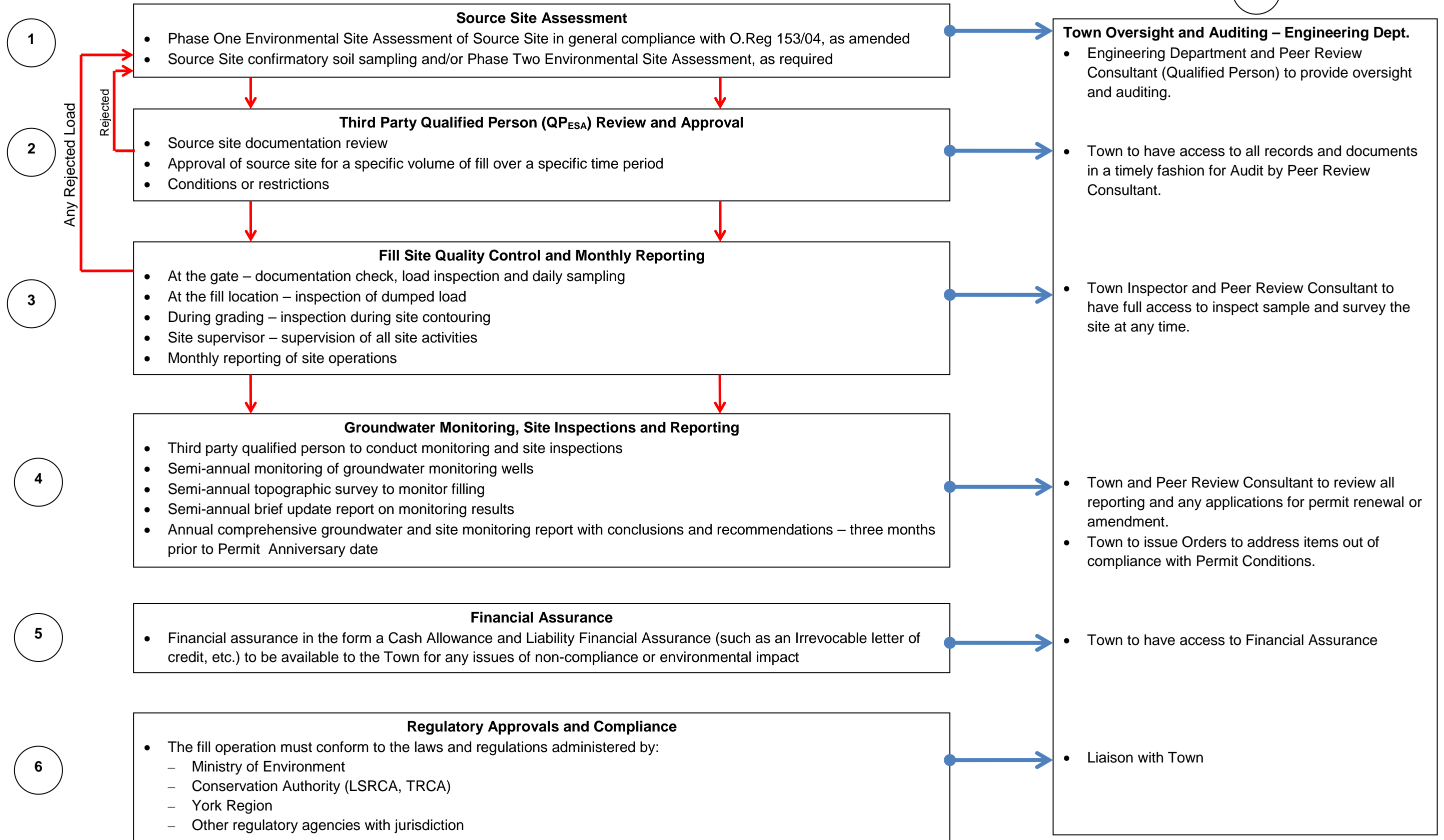
Reporting requirements for Large Site Alterations include the requirement to review and update the SA&FMP to reflect changing site conditions and activities, as well as, changes due to amendments to Town By-laws and the conditions imposed by other agencies with jurisdiction. Addendums or amendments to the SA&FMP must be approved by the Director to maintain compliance with the Conditions of a Permit and Agreement.

Failure to comply with the Conditions of a Permit or Agreement could lead to Orders, Revocation of the Permit and/or fines.

Appendix G

Fill Quality Control, Environmental Protection, Monitoring and Oversight Flow Chart

Site Alteration and Fill By-law 2017-017-RE
Fill Quality Control, Environmental Protection, Monitoring and Oversight
Town of Whitchurch-Stouffville
 (Version August 8, 2014)



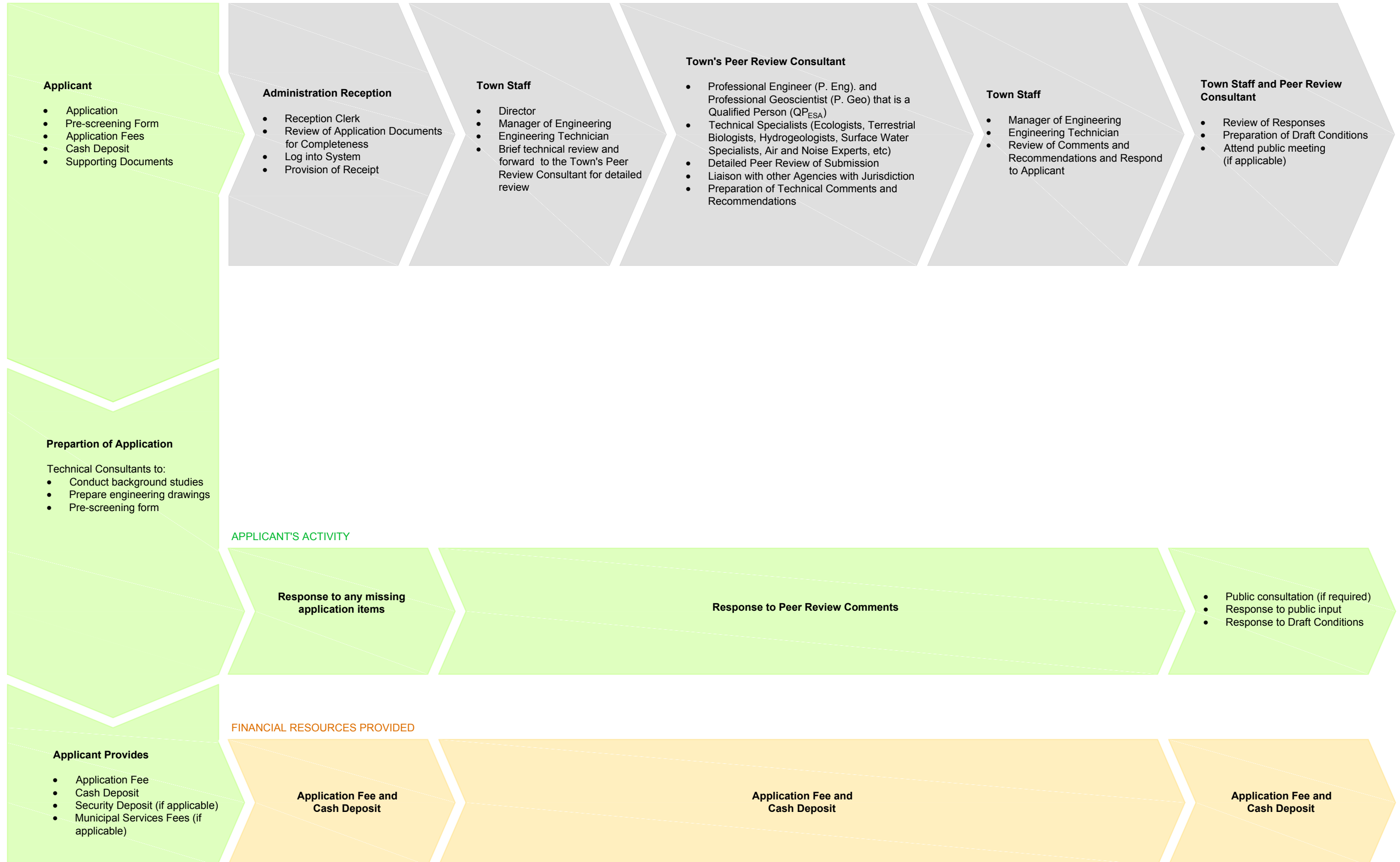
Appendix H

Administrative Flow Chart – Site Alteration and Fill By-law

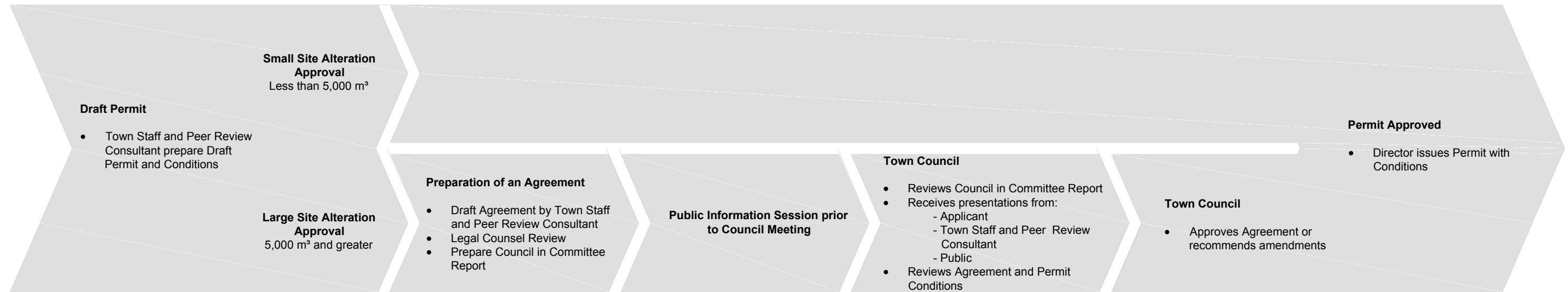
PERMIT APPLICATION

PERMIT APPLICATION REVIEW

TOWN'S ADMINISTRATIVE PROCESS



PERMIT AND AGREEMENT (If Required) APPROVAL PROCESS



SITE ALTERATION AND FILL ACTIVITIES

PROJECT COMPLETE

