

Site Alteration

Discussion Paper



Cover photos courtesy of Mark Richardson, Don Maciver and Amy MacPherson.

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1.0 Introduction

The City of Ottawa is developing a site alteration by-law. The purpose of this Discussion Paper is to:

- Present some basic background information on site alteration and site alteration by-laws in Ontario, and the current situation in Ottawa;
- Explain the guiding principles under which Ottawa's site alteration by-law is being developed;
- Consider the circumstances under which site alteration may not be appropriate; and,
- Identify some potential minimum standards / best practices for site alteration.

After reading this paper, we hope that interested stakeholders and members of the public will join the discussion and help define appropriate parameters for site alteration activities in Ottawa.

1.1 Site Alteration

"Site alteration" is commonly defined as the placing or dumping of fill, the removal of topsoil, or changing the grade of land. Some municipalities also include vegetation removal in their definition of site alteration. It is a necessary part of land development and other normal human activities. Done responsibly, site alteration avoids potential impacts to:

- Soil and water quality,
- Sensitive natural areas such as wetlands, woodlands and valleylands,
- Productivity of agricultural land, and
- Surrounding properties.

Site alteration that is not properly managed can:

- Reduce soil quality through compaction, contamination, or decreased fertility,
- Cause water quality or quantity issues (e.g., sedimentation, pollution, flooding),
- Damage or destroy trees and other natural features, and
- Create aesthetic or health and safety issues (e.g., dust, weeds, vibrations, unstable slopes, open pits).

Maintaining the City's ability to steward its natural resources and achieve good environmentally sustainable development as mandated by the Province of Ontario is a key basis for developing a site alteration by-law. The [Provincial Policy Statement](#) (MMAH, 2014) provides policy guidance to municipalities, addressing the need to protect natural features, water resources, agricultural lands, mineral aggregate resources, and cultural heritage landscapes, while allowing for the growth of strong, healthy communities. It specifically prohibits site alteration in southern and eastern Ontario's significant wetlands, and directs that site alteration should not be allowed in or adjacent to most other significant natural features if it would result in negative impacts to those features or their ecological functions. In order to implement these provincial policies, municipalities are empowered by the [Municipal Act](#) to pass by-laws to regulate site alteration activities (see relevant excerpt in Appendix A). Conservation Authorities are also empowered to regulate site alteration in specific areas (e.g., floodplains, watercourses and wetlands) under the [Conservation Authorities Act](#).

Most major municipalities in southern and eastern Ontario, and many smaller ones, have adopted site alteration by-laws (see list of examples in Appendix B). These by-laws establish parameters for site alteration activities in the municipality, typically requiring a permit to be obtained before beginning most types of work. They also allow for stop-work orders to be issued in cases where the rules are broken, and for corrective actions and penalties to be applied where warranted.

Ottawa's nearest neighbour with a site alteration by-law in effect is the City of Kingston, which has had its by-law in place since 2008. The Town of Mississippi Mills has recently (2015) developed a draft by-law based on Kingston's model. That by-law has not yet been adopted.

The Municipal Act also establishes legal limits to ensure that site alteration by-laws do not duplicate existing legislation or interfere with legitimate activities. A site alteration by-law CANNOT apply to:

- Any lands already regulated by the Conservation Authorities,
- The City's own activities,
- Normal farming practices,
- Development-related activities needed to fulfill conditions of approval,
- Lawful aggregate extraction activities,
- Construction or maintenance of electrical transmission systems, or
- Construction or maintenance of municipal or tile drains.

Many municipalities also provide for other exemptions in their site alteration by-laws, to enable small-scale projects that are unlikely to cause negative impacts to proceed without a permit.



1: The installation of tile drains, and other normal farming practices, would not be subject to the new by-law.

1.2 Current Situation in Ottawa

Ottawa does not currently have a comprehensive site alteration by-law, although the City's [Official Plan](#) includes policies directing staff to develop such a by-law. The Official Plan also contains policies consistent with the provincial direction to protect significant natural features, water resources, agricultural lands, etc. However, without a by-law that enables the City to establish consistent parameters, those policies can only be implemented on a project by project basis through the development review process, with the proponent's willing cooperation.

Ottawa's three local Conservation Authorities (Mississippi Valley, Rideau Valley and South Nation) are able to regulate site alteration under the Conservation Authorities Act, but only when it affects specific features under their jurisdiction, such as watercourses, flood plains, and provincially significant wetlands¹. A permit from the appropriate Conservation Authority may be required for site alteration activities in and around these features. The Conservation Authorities can order corrective actions or impose fines for illegal site alteration in areas under their jurisdiction.

Ottawa's [Drainage By-law](#), which was adopted in 2007, is a limited version of a site alteration by-law that enables the City to address complaints about drainage issues caused by site alteration. It does not require a permit or any prior approval for site alteration activities, but does allow the City to issue stop-work orders and require corrective actions to be taken if those site alteration activities impact off-site drainage. The Drainage By-law applies City-wide, except in areas already regulated by a Conservation Authority, and is an effective tool for correcting drainage problems. It cannot be used to address any other issues such as fill quality, agricultural productivity, dust, or protection of natural features.

The [Urban Tree Conservation By-law](#), adopted in 2009, can be used to address site alteration activities that impact trees in certain parts of the City. Under this by-law, a permit may need to be obtained before harming or removing trees on private property in the urban, suburban and future urban expansion areas of Ottawa. On properties greater than 1 hectare in size, or in cases involving a development application, the by-law applies to all trees that measure at least 10 cm in diameter at breast height (1.2 m above the ground). On properties 1 hectare or less in size, where no development application is involved, the by-law applies only to large ("distinctive") trees measuring at least 50 cm diameter at breast height. The City can issue stop-work orders under this by-law and require corrective actions relating to tree protection. It can also apply penalties for illegal tree damage or removal. This by-law does not apply in the rural area, where most of Ottawa's significant woodlands occur, and does not address any issues other than tree protection.

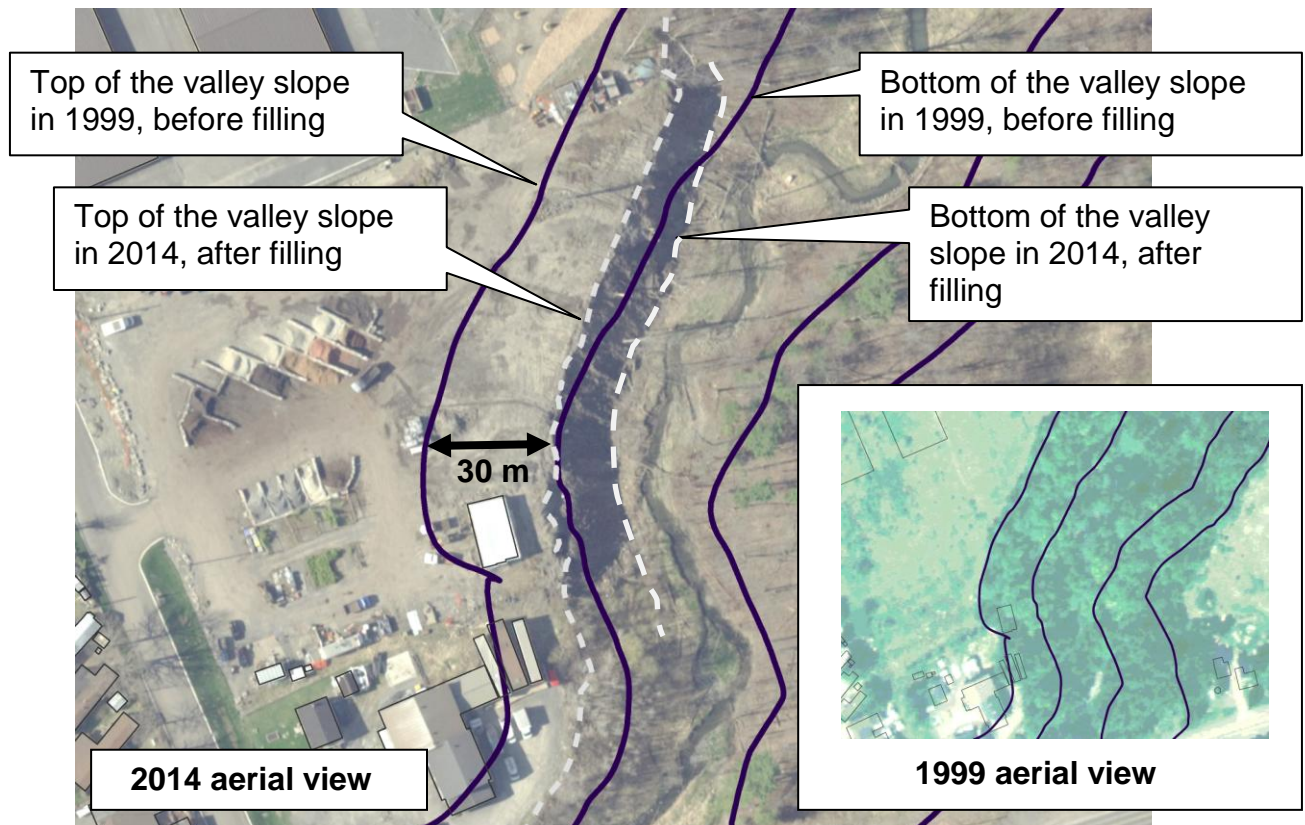
Ottawa also has a collection of pre-amalgamation by-laws for the regulation of topsoil removal, left over from eight of the eleven former municipalities: Cumberland, Gloucester, Goulbourn, Kanata, Nepean, Osgoode, Rideau and West Carleton. These by-laws were enacted under the provincial Topsoil Preservation Act (repealed in 2003) and were generally intended to protect each municipality's agricultural productivity. These by-laws apply only to topsoil removal, not to the filling or grading of land. They are not consistent with each other in terms of what is or is not allowed. Some require permits to be obtained before topsoil is removed, but the processes to obtain those permits no longer exist. They carry minimal penalties

¹ The Mississippi Valley Conservation Authority is currently considering an expansion of its regulations to include some unevaluated and non-provincially significant wetlands as well.

(maximum \$2,000 fine) and are rarely if ever enforced. They are not effective at regulating topsoil removal or any other site alteration activities on a consistent City-wide basis.

If site alteration activities associated with a development application are causing problems, such as erosion, or excessive dust or vibrations, the City's Planning and Growth Management department may issue a stop-work order to the developer, and request corrective actions. Unless the site alteration activities have contravened one of the City's existing by-laws, however, the stop-work order is not legally enforceable. Compliance with that order and any corrective actions would be voluntary.

Under this current patchwork of by-laws and other regulations, staff are unable to adequately address site alteration issues, many of which are brought forward as complaints. There have also been cases where City staff were unable to implement Official Plan policies, because the features those policies were intended to address were altered or removed before a development application was filed or approved. This circumvents the planning process and compromises the City's ability to steward its valuable resources and promote sustainable development.



2: Results of approximately ten years of filling on a formerly forested significant valleyland. The filled slope is beginning to encroach on the creek, and is vulnerable to erosion. Only the creek is currently regulated by the local Conservation Authority.

2.0 Guiding Principles for Ottawa's Site Alteration By-law

City staff propose to expand the current Drainage By-law into a more comprehensive site alteration by-law. This “rules in regulation” approach, which differs from the permit-based system used by other Ontario municipalities, will avoid the need for increased staff resources and other costs associated with such systems. It will allow site alteration activities to proceed without delay, provided that these activities are carried out in accordance with the parameters that will be established in the by-law. If site alteration occurs that is not in accordance with the by-law, the City will be able to issue and enforce stop-work orders, corrective orders and financial penalties when warranted.

The following principles will guide the development of the by-law:

- Will be developed with the affected stakeholders,
- Will be focused on setting out appropriate parameters for site alteration and for managing site alteration using best practices,
- Will not require that a permit be obtained,
- Will be integrated with the Drainage By-law and replace the existing pre-amalgamation Topsoil Preservation by-laws,
- Will not prevent sites from being prepared for development prior to planning approvals (pre-loading, etc.),
- Will provide ability to pursue corrective actions where site alteration has been undertaken in a manner not consistent with the parameters set out in the by-law, and
- Enforcement will occur on a complaints basis.

Staff have consulted with key stakeholders from other government agencies, affected industries, and interest groups regarding appropriate parameters for site alteration activities within the framework of these principles. Information obtained through these stakeholder discussions and from background research has been used in the preparation of this discussion paper.



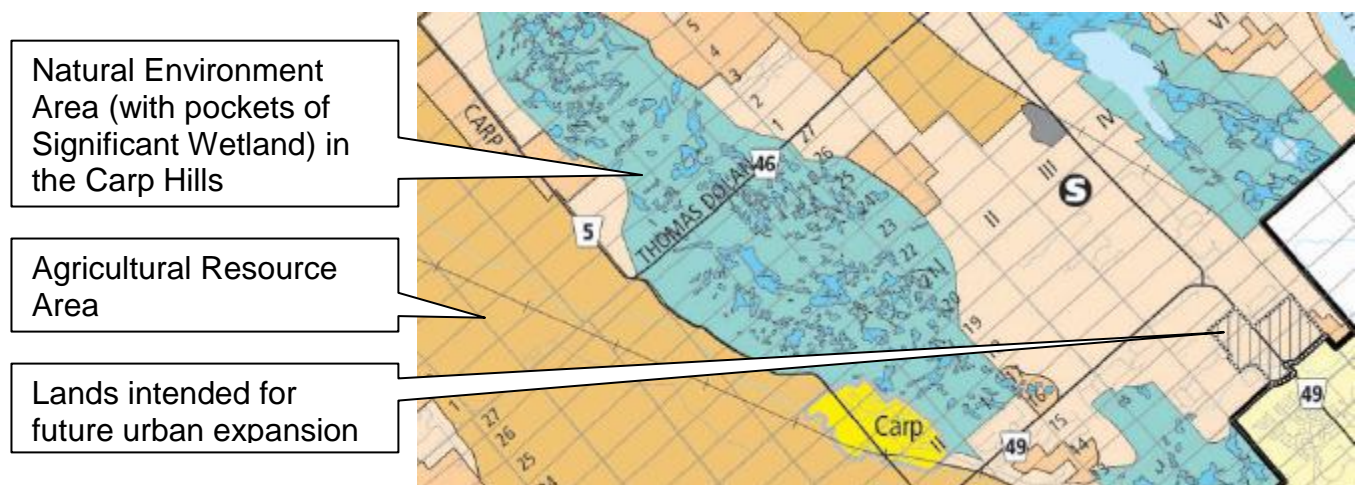
3: Site preparation in advance of development, showing stockpiled topsoil and exposed subsoil.

3.0 Potential Parameters for Site Alteration

Site alteration is an ongoing activity in Ottawa, as the City grows and its residents continue to manage their properties. This is especially true in areas identified for urban and suburban development, or in other settlement areas such as villages. There are some areas of the City, however, where site alteration is intended to be restricted to a greater or lesser degree under the policies of Ottawa's Official Plan. Specific provisions to address some or all of these areas may be considered in the development of the draft by-law.

The policies for environmental lands designated as Significant Wetlands, Natural Environment Areas, or Urban Natural Features in the Official Plan establish strict limits on their permitted uses in order to protect these sensitive features and their ecological functions. Site alteration is explicitly prohibited in these areas under the City's Official Plan policies, except in very limited circumstances. The by-law could define acceptable limits for site alteration activities in Natural Environment Areas and Urban Natural Features to only those needed to support the permitted uses (e.g., the construction and maintenance of single homes on existing lots in Natural Environment Areas) in accordance with Official Plan policies. Significant Wetlands are already regulated by the Conservation Authorities and therefore would not be addressed by the City's by-law.

Other natural features have been identified outside of these designated environmental lands, such as significant woodlands, significant valleylands, and other components of Ottawa's natural heritage system. The policies governing these features direct that they are to be protected from negative impacts of site alteration occurring in or adjacent to them. During the development review process, this is usually achieved by requiring applicants to complete an Environmental Impact Statement (EIS) and apply its recommended mitigation measures. Outside of the development review process, there is currently no mechanism to require an EIS. The by-law could introduce such a requirement, or could alternatively require standard mitigation measures to be applied to avoid or reduce potential negative impacts.



4: Excerpt from Schedule A of the City's Official Plan

There are also areas where site alteration activities, while not explicitly restricted, could conflict with the intent of the Official Plan policies. These include designated Agricultural Resource Areas, and lands intended for future urban or village expansion. The removal of topsoil from Agricultural Resource Areas is already imperfectly regulated through the existing patchwork of topsoil by-laws, and should continue to be regulated under the new comprehensive by-law. It

may also be appropriate to consider restrictions on fill used in Agricultural Resource Areas, to protect soil quality. Within the urban expansion lands, parameters for site alteration may be defined to ensure that significant natural areas that form part of the City's natural heritage system, which are to be identified and conveyed to the City for conservation through the area planning process, are not compromised before the completion of that process.

4.0 Potential Standards for Site Alteration

In order to avoid or reduce the potential negative impacts of site alteration, the by-law will establish standards on how it is to be carried out. Other municipalities typically establish conditions for site alteration activities through their by-laws, specifying how it is to be done. Stakeholders were also asked what minimum standards, or best practices, they thought should be applied to site alteration activities in Ottawa.

Common themes for such measures include:

- Authorization from landowner – while fairly basic, many municipal by-laws specify that site alteration can only be done by the property owner, or with the owner's written consent.
- Other jurisdictions – many municipal by-laws (with permit systems) point out that obtaining a permit does not relieve the applicant from the need to satisfy any other agencies' requirements (e.g., Conservation Authorities, Ministry of Natural Resources and Forestry, etc.).
- Notification – many municipalities require advance notice to be provided to nearby residents and/or municipal representatives, prior to commencing on-site works; this was also suggested by some stakeholders as a good business practice.
- Fill quality – where filling is proposed, most municipal by-laws define what they consider to be acceptable fill; there are also provincial standards that apply. These standards may vary depending on the future use of the lands being filled, but are generally intended to ensure that there will be no dumping of contaminated materials.
- Fill quantity / grading limits – most municipal by-laws have provisions limiting grade changes near property limits, which could cause drainage impacts. Many also have exemptions for projects involving small amounts of fill, such as the creation of raised garden beds or other landscaping, as long as these grading limits are respected.
- Sediment and erosion control – many municipal by-laws require sediment and erosion control measures to be installed and maintained until the site has stabilised. This is also considered a good professional practice.
- Drainage – most municipalities have restrictions on changes to drainage; Ottawa's existing prohibitions regarding negative impacts to drainage will be carried forward into the new by-law.
- Trees and natural areas – many municipalities have requirements for the protection of trees and natural areas.
- Archaeological resources – most municipalities have provisions regarding the protection of any archaeological or cultural resources discovered during site alteration activities.

Some stakeholders also suggested that the use of the free "Ontario One Call" underground utility location service should be included in the by-law.

5.0 Have Your Say

Please let us know what you think!

We would appreciate your input on what parameters the City should establish for site alteration, and any other factors that you think the City should consider as we move ahead with the development of the by-law, in order to ensure that site alteration is carried out in a responsible way that avoids or reduces the risk of negative impacts. Please remember the guiding principles (set out in Section 2.0) and the legal limits on what the by-law can do when providing your input.

Please send your comments to Amy MacPherson, Natural Systems Planner, at:

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Regular mail: Amy MacPherson
City Hall
110 Laurier Avenue West, 4th Floor (Mail Code 01-14)
K1P 1J1

Fax: (613) 580-2459

Website: ottawa.ca/sitealteration



5: Properly installed and maintained fencing protects a natural area from adjacent site alteration work.

Appendix A – Municipal Act Excerpt

For the full text of this Act, please consult the Province of Ontario's e-Laws [website](#).

Site alteration

Definition

142. (1) In this section,

“topsoil” means those horizons in a soil profile, commonly known as the “O” and the “A” horizons, containing organic material and includes deposits of partially decomposed organic matter such as peat. 2001, c. 25, s. 142 (1).

Powers of local municipality

(2) Without limiting sections 9, 10 and 11, a local municipality may,

- (a) prohibit or regulate the placing or dumping of fill;
- (b) prohibit or regulate the removal of topsoil;
- (c) prohibit or regulate the alteration of the grade of the land;
- (d) require that a permit be obtained for the placing or dumping of fill, the removal of topsoil or the alteration of the grade of the land; and
- (e) impose conditions to a permit, including requiring the preparation of plans acceptable to the municipality relating to grading, filling or dumping, the removal of topsoil and the rehabilitation of the site. 2006, c. 32, Sched. A, s. 76 (1).

Delegation to upper-tier

- (3) A lower-tier municipality may delegate all or part of its power to pass a by-law respecting the dumping or placing of fill, removal of topsoil or the alteration of the grade of land to its upper-tier municipality with the agreement of the upper-tier municipality. 2001, c. 25, s. 142 (3).
- (4) REPEALED: 2006, c. 32, Sched. A, s. 76 (2).

Exemptions

- (5) A by-law passed under this section does not apply to,
 - (a) activities or matters undertaken by a municipality or a local board of a municipality;
 - (b) the placing or dumping of fill, removal of topsoil or alteration of the grade of land imposed after December 31, 2002 as a condition to the approval of a site plan, a plan of subdivision or a consent under section 41, 51 or 53, respectively, of the *Planning Act* or as a requirement of a site plan agreement or subdivision agreement entered into under those sections;
 - (c) the placing or dumping of fill, removal of topsoil or alteration of the grade of land imposed after December 31, 2002 as a condition to a development permit authorized by regulation made under section 70.2 of the *Planning Act* or as a requirement of an agreement entered into under that regulation;
 - (d) the placing or dumping of fill, removal of topsoil or alteration of the grade of land undertaken by a transmitter or distributor, as those terms are defined in section 2 of

the *Electricity Act, 1998*, for the purpose of constructing and maintaining a transmission system or a distribution system, as those terms are defined in that section;

- (e) the placing or dumping of fill, removal of topsoil or alteration of the grade of land undertaken on land described in a licence for a pit or quarry or a permit for a wayside pit or wayside quarry issued under the *Aggregate Resources Act*;
- (f) the placing or dumping of fill, removal of topsoil or alteration of the grade of land undertaken on land in order to lawfully establish and operate or enlarge any pit or quarry on land,
- (i) that has not been designated under the *Aggregate Resources Act* or a predecessor of that Act, and
- (ii) on which a pit or quarry is a permitted land use under a by-law passed under section 34 of the *Planning Act*; or
- (g) the placing or dumping of fill, removal of topsoil or alteration of the grade of land undertaken as an incidental part of drain construction under the *Drainage Act* or the *Tile Drainage Act*. 2001, c. 25, s. 142 (5); 2002, c. 17, Sched. A, s. 30 (2, 3).

Exception

- (6) A by-law respecting the removal of topsoil does not apply to the removal of topsoil as an incidental part of a normal agricultural practice including such removal as an incidental part of sod-farming, greenhouse operations and nurseries for horticultural products. 2001, c. 25, s. 142 (6).

Exclusion

- (7) The exception in subsection (6) respecting the removal of topsoil as an incidental part of a normal agricultural practice does not include the removal of topsoil for sale, exchange or other disposition. 2001, c. 25, s. 142 (7).

By-law ceases to have effect

- (8) If a regulation is made under section 28 of the *Conservation Authorities Act* respecting the placing or dumping of fill, removal of topsoil or alteration of the grade of land in any area of the municipality, a by-law passed under this section is of no effect in respect of that area. 2001, c. 25, s. 142 (8).

Appendix B – Links to Other Municipalities' Site Alteration By-laws

City of Barrie (2014) <http://www.barrie.ca/City%20Hall/ByLaws/BylawDocs/By-law%202014-100%20Bill%20106.pdf?@FileDirRef=City Hall/ByLaws/BylawDocs>

City of Brantford (2011) http://www.brantford.ca/residents/family/home_improvement/Pages/SiteAlterationBy-law.aspx

City of Burlington (2014) <http://www.burlington.ca/en/Modules/Bylaws/Bylaw/Details/3a5b5a42-0ea3-4126-b273-e850afb82198>

Town of Georgina (last amended May 2014) <https://www.georgina.ca/living-here/development-engineering/site-alteration-permits>

City of Guelph (2007) <http://guelph.ca/wp-content/uploads/SiteAlterationBylaw.pdf>

Town of Halton Hills (2010) <http://www.haltonhills.ca/Development/siteAlt.php>

City of Hamilton (last amended September 2014) <http://www2.hamilton.ca/NR/ronlyres/29FFED80-0DE6-4A06-AE6C-6DBD7D54096D/0/03126SiteAlterationAsAmended.pdf>

City of Kawartha Lakes (2012) https://www.city.kawarthalakes.on.ca/property-development-by-law/municipal-law-enforcement/2012200_Bylaw_Regulating_the_Removal_of_TopSoil_Placement_of_Fill_and_the_Alteration_of_Grades.pdf

City of Kingston (2008) <https://www.cityofkingston.ca/documents/10180/16904/Site+Alteration+Bylaw/5149d586-e1db-4da4-9a40-b35c0e72168d>

City of Kitchener (2010) http://www.kitchener.ca/en/businessinkitchener/Site_alteration.asp

City of London (last amended September 2015) <https://www.london.ca/city-hall/by-laws/Documents/site-alterationCP1363.pdf>

Town of Markham (2011) <http://www.markham.ca/wps/wcm/connect/markhampublic/d9c29487-be8a-435c-b22d-ce3113e56380/2011-232.pdf?MOD=AJPERES&CACHEID=d9c29487-be8a-435c-b22d-ce3113e56380>

Town of Mississippi Mills (draft for consultation, November 2015) http://www.mississippimills.ca/uploads/12/Doc_635827654815106316.pdf

Township of Muskoka Lakes (2008) http://clearlakemuskoka.ca/resources/site_alteration_by-law_2008-56.pdf

City of Niagara Falls (last amended 2015) https://www.niagarafalls.ca/pdf/by-laws/site_alteration_by-law.pdf

City of Oshawa (2006) <https://www.oshawa.ca/residents/landscaping-and-grading.asp>

City of St. Thomas (2010) <http://stthomas.ca/content/site-alteration-law>

City of Greater Sudbury (2009)
[http://www.greatersudbury.ca/content/div_clerks/documents/Regulate Removal of Topsoil Bylaw 2009-170.pdf](http://www.greatersudbury.ca/content/div_clerks/documents/Regulate%20Removal%20of%20Topsoil%20Bylaw%202009-170.pdf)

City of Waterloo (2010) <http://www.waterloo.ca/en/business/sitealterations.asp>

City of Welland (2010) <http://welland.ca/ByLaws/bylaw2010-88.pdf>