

## **Fill Control Plan for Fill Permit by Professional Engineers**

Many lot owners endeavour make plans to landscape, change the grade of the lot or strip the lot to improve their lot. Prior to undertaking these fill projects, lot owners and grading/landscape contractors are required to submit a Fill Control Plan and obtain a Fill Permit.

Fill is any type of material deposited or placed on lands, including soil, stone, concrete, asphalt, sod, or turf. Fill is defined as topsoil, soil, rock, stone, clean concrete without coating, free of rebar and free from contamination, sod or turf; either singularly or in combination and scientifically demonstrated inert material. All Fill must meet the applicable Site Condition Standards, must not contain putrescible materials, must be free of termites and invasive species, including the eggs and seeds of such species and must pass a slump test as outlined in the General Waste Management provisions contained in Ontario Regulation 347.

The Fill Control Plan for a Fill Permit ensures that the natural system on or adjacent to the lot is effectively protected and managed, surface drainage on adjacent lots is not affected by the fill, the surface features such as swales and catch basins are not altered and that all the legal and legislative policy requirement are met. It also requires that applicant for the Fill Permit employ safe working measures and that compliance with applicable municipal and conservation authority standards are met. Another requirement of the Fill Control Plan for the Fill Permit is that the public roads are kept free of debris during the filling or stripping process.

Ontario Regulation 166/06 protects watercourses, wetlands, shorelines and valley lands and it protects from flooding, erosion and loss of green space.

Any filling, changing grade, or building anything on a lot within a regulated area, requires a Fill Control Plan to obtain a Fill Permit from the Conservation Authority.

Ontario Regulation 166/06 requires a Fill Control Plan to obtain a Fill permit for temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere and/or lot grading.

A Site Alteration is defined as any alteration to the existing grade of a lot through the movement, removal or placement of Fill. Any alteration to the grade of the land including filling, dumping, extracting or moving soil must be performed as per the approved Fill Control Plan prepared in compliance with the municipal By-law which regulates Site Alterations to avoid creating drainage problems and ensure that ground water and the environment is protected from contaminated material.

Large amounts of soil are being moved to support significant economic activities and developments throughout Ontario including City of Toronto, Peel Region (Brampton, Mississauga and Caledon), Halton Region (Burlington, Oakville, Milton, and Halton Hills), Brant County, City of Hamilton, Haldimand County, Norfolk County, Niagara Region (Niagara Falls, Port Colborne, St. Catharines, Thorold, Welland, Fort Erie, Grimsby, Lincoln, Niagara-on-the-Lake, Pelham, Wainfleet and West Lincoln), City of Brantford, City of London, Town of St. Marys, City of St. Thomas, City of Stratford, Oxford County (Woodstock, Ingersoll, Tillsonburg, Blandford-Blenheim, East Zorra-Tavistock, Norwich, South-West Oxford and Zorra), Waterloo Region (Kitchener, Cambridge, Waterloo, Woolwich, Wilmot, Wellesley, and North Dumfries), City of Guelph, Wellington County (Centre Wellington, Erin, Guelph / Eramosa, Mapleton, Minto, Puslinch, and Wellington North), Dufferin County (Melancthon, Shelburne. Mono. Mulmur. Amaranth, East Garafraxa, Orangeville and Grandvalley), Bruce County (Saugeen Shores, Kincardine, Brockton, South Bruce Peninsula, Arran–Elderslie. Huron-Kinloss, South Bruce, and Northern Bruce Peninsula), Grey County (Chatsworth, Georgian Bluffs, Grey Highlands, Hanover, Meaford, Owen Sound, Southgate, The Blue Mountains and West Grey), York Region (Aurora, East Gwillimbury, Georgina, King, Markham, Newmarket, Richmond Hill, Vaughan and Whitchurch–Stouffville), Durham Region (Ajax, Brock, Clarington, Oshawa, Pickering, Scugog, Uxbridge and Whitby), Quinte West, Hastings County (Bancroft, Deseronto, Centre Hastings, Hastings Highlands, Carlow/Mayo, Faraday, Limerick, Madoc, Marmora and Lake, Stirling-Rawdon, Tudor and Cashel, Tweed, Tyendinaga and Wollaston), Northumberland County (Brighton, Cobourg, Port Hope, Trent Hills, Alnwick / Haldimand, Cramahe and Township of Hamilton), City of Peterborough, Haliburton County (Algonquin Highlands, Dysart, Bruton, Clyde, Dudley, Eyre, Guilford, Harburn, Harcourt, Havelock, Highlands East and Minden Hills), City of Kawartha Lakes, Simcoe County (Bradford West Gwillimbury, Collingwood, Innisfil, Midland, New Tecumseth, Penetanguishene, Wasaga Beach, Adjala–Tosorontio, Clearview, Essa, Oro-Medonte, Ramara, Severn, Springwater, Tay, and Tiny), City of Barrie, City of Orillia, and District of Muskoka (Bracebridge, Gravenhurst, Huntsville, Georgian Bay, Lake of Bays and Muskoka Lakes).

Earth moving companies that dig or push earth approach lot owners offering Fill for free. Excess soil comes from construction excavations and the rehabilitation of brownfields. Hundreds of trucks a day are looking for a place to dump excess soil from new subdivisions and condo towers and from old gas stations and abandoned lead smelters. The Ministry of the Environment encourages the reuse of excess soil as fill to avoid unnecessary disposal in landfill, as long as the soil is managed in an environmentally responsible manner. To help facilitate the beneficial reuse of excess soil as fill, the ministry has developed "Best Management Practices for Soil Management in Ontario."

Under the Ontario Regulation 153/04 (Records of Site Condition – Part XV.1) soil is defined as "unconsolidated naturally occurring mineral particles and other naturally occurring material resulting from the natural breakdown of rock or organic matter by physical, chemical or biological processes that are smaller than 2 mm in size or that pass the US #10 sieve".

In the deposition of soils from different sites as fill, it is often the water that travels across or through the disturbed sites that is fingered as the medium that warrants considerable attention when it comes to assessing impact. Where fill of a different composition and character is transported to a new site, the potential arises for changes to be reflected in the groundwater and surface water. Changes can be related to water quality, recharge characteristics, or to changes in the local groundwater flow system.

A fill solely for the purpose of agricultural soil enrichment may be considered exempt from portions of the large fill policy provided that the depth of the fill is minimal (generally less than 20cm in depth) and the control of flooding, erosion, dynamic beaches, pollution or the conservation of land will not be adversely affected by the fill activity.

Municipalities in Ontario including City of Toronto, Peel Region (Brampton, Mississauga and Caledon), Halton Region (Burlington, Oakville, Milton, and Halton Hills), Brant County, City of Hamilton, Haldimand County, Norfolk County, Niagara Region (Niagara Falls, Port Colborne, St. Catharines, Thorold, Welland, Fort Erie, Grimsby, Lincoln, Niagara-on-the-Lake, Pelham, Wainfleet and West Lincoln), City of Brantford, City of London, Town of St. Marys, City of St. Thomas, City of Stratford, Oxford County (Woodstock, Ingersoll, Tillsonburg, Blandford-Blenheim, East Zorra-Tavistock, Norwich, South-West Oxford and Zorra), Waterloo Region (Kitchener, Cambridge, Waterloo, Woolwich, Wilmot, Wellesley, and North Dumfries), City of Guelph, Wellington County (Centre Wellington, Erin, Guelph / Eramosa, Mapleton, Minto, Puslinch, and Wellington North), Dufferin County (Melancthon, Shelburne, Mono, Mulmur, Amaranth, East Garafraxa, Orangeville and Grandvalley), Bruce County (Saugeen Shores, Kincardine, Brockton, South Bruce Peninsula, Arran–Elderslie, Huron-Kinloss, South Bruce, and Northern Bruce Peninsula), Grey County (Chatsworth, Georgian Bluffs, Grey Highlands, Hanover, Meaford, Owen Sound, Southgate, The Blue Mountains and West Grey), York Region (Aurora, East Gwillimbury, Georgina, King, Markham, Newmarket, Richmond Hill, Vaughan and Whitchurch–Stouffville), Durham Region (Ajax, Brock, Clarington, Oshawa, Pickering, Scugog, Uxbridge and Whitby), Quinte West, Hastings County (Bancroft, Deseronto, Centre Hastings, Hastings Highlands, Carlow/Mayo, Faraday, Limerick, Madoc, Marmora and Lake, Stirling-Rawdon, Tudor and Cashel, Tweed, Tyendinaga and Wollaston), Northumberland County (Brighton, Cobourg, Port Hope, Trent Hills, Alnwick / Haldimand, Cramahe and Township of Hamilton), City of Peterborough, Haliburton County (Algonquin Highlands, Dysart, Bruton, Clyde, Dudley, Eyre, Guilford, Harburn, Harcourt, Havelock, Highlands East and Minden Hills), City of Kawartha Lakes, Simcoe County (Bradford West Gwillimbury, Collingwood, Innisfil, Midland, New Tecumseth, Penetanguishene, Wasaga Beach, Adjala–Tosorontio, Clearview, Essa, Oro-Medonte, Ramara, Severn, Springwater, Tay, and Tiny), City of Barrie, City of Orillia, and District of Muskoka (Bracebridge, Gravenhurst, Huntsville, Georgian Bay, Lake of Bays and Muskoka Lakes) rely on their fill by-laws to regulate the dumping of clean fill and the Ministry of the Environment and Climate Change (MOECC) uses their regulations to protect the environment from polluted soil.

If you are contacted by someone wanting to supply you with Fill for your property, there are certain things you should know: Altering the lot grading could change the storm drainage flows on and off. Storm drainage that doesn't flow properly can cause problems for the subject property and adjacent property such as flooding, ponding, erosion and sedimentation during spring thaws or rainstorms. Use of contaminated soil as fill can negatively impact the ground water and environment, affecting wells, ponds, rivers, streams, and lakes. Once the soil is delivered onto the owner's property, it becomes their responsibility for the cost of the contaminated fill clean up.

Lot Owners must obtain a Fill Permit, when

- ❖ Creating a man-made pond.
- ❖ Building a berm or retaining wall.
- ❖ Moving/ re-routing the driveway.
- ❖ Any work that alters the Existing Grading of a lot

## **Fill Control Plan for Fill Permit**

Fill Control Plan for Fill Permit prepared by our Professional Engineers typically include the following information

- ✓ A key map showing the location of each lot within the subject land, including the nearest major intersection and a directional arrow
- ✓ Boundaries and size of the areas to be filled
- ✓ Use of the lot and the location and use of the buildings and other structures  
the location and dimension of all proposed land disturbance activities, including construction of access roads;
- ✓ the location and dimensions of all temporary soil, dirt or fill stockpiles;

- ✓ the location, dimensions, design details and design calculations of all erosion control measures necessary to minimize the impact of the proposal;
- ✓ a schedule of the anticipated starting and completion dates for each land disturbance or land development activity;
- ✓ a statement outlining the measures that will be undertaken and utilized to monitor and maintain all construction site erosion control and dust control measures during construction;
- ✓ a scaled drawing, ranging from 1:250 to 1:1000 as deemed appropriate, of the Fill Control Plan (each drawing control plan to be in metres);
- ✓ an indication on the drawing of directions of overland water flow and overland flow route;
- ✓ a plan showing the final grades in relation to adjacent properties. a plan to ensure that the finished grade surface is protected by sod, seeding, greenery asphalt, concrete, or other means either singly or in combination;
- ✓ Location of lakes, streams, wetlands, channels, ditches, other watercourses and other bodies of water on and within 30m of the areas to be filled or disturbed as part of the fill;
- ✓ Regional Storm Flood Plain and Conservation Authority Fill Regulation lines;
- ✓ Species, grade at base and size, in caliper, of all trees greater than 250mm in caliper, all shrubs, trees and hedges within 1 m of the of the areas to be filled or disturbed as part of the fill;
- ✓ Location and dimensions of any existing and proposed stormwater drainage systems and natural drainage patterns on and within 30m of the areas to be filled or disturbed as part of the operation;
- ✓ Location and dimensions of utilities, structures, roads, highways and paving located within 30m of the areas to be filled or disturbed as part of the fill;

- ✓ Topography within 30m of the areas to be filled or disturbed as part of the fill;
- ✓ Final grades of the areas to be filled or disturbed as part of the fill; Directions of overland storm drainage and overland storm drainage route within 30m of the areas to be filled or disturbed as part of the operation;
- ✓ Final drainage system to be used upon completion of the fill; providing the existing and proposed use of the subject land, the location, dimensions and use of all buildings and structures and any proposed buildings or structures on the subject land and on the adjacent lands;
- ✓ a map showing the location of any lakes, streams, wetlands, channels, ditches, watercourses and any other body of water located on the subject land and within thirty (30) metres of each lot boundary;
- ✓ a map showing the location and identification of the predominant existing soil types;
- ✓ a map showing the location and dimensions of any existing and proposed storm water drainage systems and natural drainage system within the subject land and within thirty (30) metres of each lot boundary;
- ✓ a map showing the location and dimensions of utilities, structures, roads, highways and paving located within the subject land and within thirty (30) metres of each lot boundary;
- ✓ a map of the existing topography of the subject land.
- ✓ the proposed final grades of each lot within the subject land;

Additional supporting documentation may be required, including (subject to scoping) to obtain a Fill Permit

- Agronomist Report
- Geotechnical Study
- Hydraulic Analysis
- Storm Water Management Report
- Written confirmation that a Final Grade Survey will be completed by a qualified professional
- Environmental Site Assessment,
- Hydrogeologic Assessment,
- Identification of the existing soil types;
- TCLP Leachate Certificate and any other fill quality control testing.
- Location of lakes, streams, wetlands, channels, ditches, other watercourses and other bodies of water located beyond 30m of the areas to be filled or disturbed
- Species, grade at base and size, in caliper, of all trees greater than 250mm in caliper, all shrubs, trees and hedges beyond 1 m of the of the areas to be filled or disturbed
- Location and dimensions of any existing and proposed stormwater drainage systems and natural drainage patterns on and within 30m of the areas to be filled or disturbed
- Location and dimensions of utilities, structures, roads, highways and paving located beyond 30m of the areas to be filled or disturbed;
- Existing topography beyond 30m of the areas to be filled or disturbed
- Directions of overland water flow and overland flow route beyond 30m of the areas to be filled or disturbed;



Once a complete Fill Control Plan is submitted the Fill Control Plan will be reviewed by By-law staff who assess the application for compliance with the municipal by-law, and conformity with the Conservation Plan.

Owners and contractors are required to notify the municipal inspector once the fill activity reaches a point where it is ready for required inspection. The inspection is usually conducted within 48 hours of notification to the municipality. We also provide general reviews of the fill activity to determine whether the fill activity is in general conformity with the plans and other documents that form the basis for the issuance of a fill permit.

Conditions of the Fill Permit may include, but are not limited to:

- the specified limit of the volume of fill that is permitted;
- the specified limit of the depth of fill that is permitted;
- adherence to the requirements of the Soil Management Plan;
- the submission of a weekly monitoring report to ensure that drainage patterns are maintained and all erosion and sediment control measures are working satisfactorily;
- the submission of weekly soil records. The records will demonstrate that all fill soil is from an approved originating site and will verify the location on the site where site alteration activities have occurred. The location of the loads will be tracked and recorded on a daily basis through the development of a locational grid tracking system for the property. The on-site manager shall inspect incoming fill material at the receiving site and shall confirm by signed documentation in the report that the quality of the fill meets the requirements of the Soil Management Plan;
- the submission of a daily summary log for loads shipped to the site, including date, daily total number of truck entering the site and the location from where the soil was loaded into each truck;

- a requirement that the site be gated and signed to prohibit access to unauthorized personnel/trucks; and,
- the submission of a post-elevation and drainage plan/report prior to the expiry of the permit.

**Call 24/7 – 416 332 1743**

**Text Messages – 416 727 8336**

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## **BUILDING EXPERTS CANADA**

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