May 14, 2008

ADDENDUM POLICY REPORT

RE: FILLING, GRADING, EXCAVATION - SITE ALTERATIONS

BACKGROUND:

The Policy Report on Filling, Grading, Excavation - Site Alterations was first presented to the Niagara Escarpment Commission (NEC) on October 17, 2007 (see Appendix A); an addendum report was prepared for January 17, 2008 (see Appendix B). The NEC requested that staff prepare this addendum to address several issues in more detail. The issues further addressed in this paper are:

1. The Definition of Development
2. The Need for an Amendment to the Niagara Escarpment Plan (NEP)
3. Exemptions to the Requirement for Testing Fill
4. Development Permit Conditions for Requiring the Testing of Fill
5. Proposed Niagara Escarpment Plan (NEP) Amendment and Interim Policies on Filling, Grading, Excavation - Site Alterations

The previous reports prepared on this subject dealt with the issues related to filling, grading and excavation – site alterations and the types of policies that the NEC could adopt to address those issues; however, those reports did not identify a comprehensive approach to addressing those issues. This report will address that deficiency. It will identify what legislative, administrative and NEP policy changes are necessary to comprehensively address the issues related to filling, grading and excavation.

SUMMARY RECOMMENDATIONS: That the NEC adopt the policy and administrative changes required to initiate action to address concerns regarding Filling, Grading, Excavations - Site Alterations. And further, that the NEC direct staff to prepare a NEP Amendment on Site Alterations.
DISCUSSION:

1. The Definition of Development

As was previously discussed, the Niagara Escarpment Planning and Development Act (NEPDA) defines “development” to “…include(s) a change in the use of any land, building or structure”. The Provincial Policy Statement 2005 (PPS), the Oak Ridges Moraine Community Plan (ORMCP) and the Greenbelt Plan (GP) all have definitions of “development” and “site alterations”, and in their text, refer to both. The NEP, throughout the document, does not separate these two ideas, including them both under the one concept of development as “a change in land…”. This is consistent with the policies of the PPS, the ORMCP and the GP which generally, in the discussions of Natural Heritage (PPS) or Natural System (GP) or Protecting Ecological and Hydrological Integrity (ORMCP), refer to development and/or site alterations together.

As discussed in Appendix A, Ontario Regulation 828/90 does not exempt “filling or grading” from requiring a Development Permit. Specifically, Exemption No. 8 Agriculture states that the cultivation of soil is exempt from requiring a Development Permit, and further states that the addition of fill is not exempt. The NEC has consistently required a Development Permit for filling, grading and excavations, generally site alterations. Ontario Regulation 828/90 includes policies that exempt certain degrees of tree cutting from requiring a Development Permit, but “development” has also generally included site alterations in terms of vegetation removal. And in fact, the NEP includes Development Criteria that addresses New Development Within Wooded Areas and Forest Management.

Since the definition of development is included in the NEPDA, and this is reflected by the regulations and the NEP, it would be inappropriate to add a different definition to the regulations or the Plan. So, while it may be clearer if the definition of “Development” in the NEPDA specifically referred to site alterations so that it was consistent with the definitions in the PPS, the ORMCP and the GP, unless the NEPDA is changed, no change is recommended in the NEP. Staff would, however, suggest that changes be made in the literature of the Niagara Escarpment Commission to clarify that a Development Permit is required for filling, grading and excavations – generally site alterations.

2. Need for an Amendment to the NEP

During the NEC’s recent discussions on the Strategic Plan, the comment was made that policies that are not adopted by amendment are often overlooked and inconsistently applied. Therefore, it is now recommended that these policies, once adopted by the Commission, should be prepared and initiated as a proposed amendment to the Niagara Escarpment Plan along with the proposed policy for the requirement for Environmental Impact Assessments. The proposed amendment should then be circulated widely in
order to obtain comments from municipalities, ministries, agencies and stakeholder groups prior to its final consideration by the Commission.

The consensus from the two previous discussions was that a definition of inert fill should be added to the NEP to clarify that importation of material that does not satisfy this requirement should not occur. Again, this is what is implied by the policies of the NEP because, at the present time, new waste disposal sites are not permitted by the Plan and the definition of waste is defined to include inert fill; but the NEP, particularly the Development Criteria and conditions added to Development Permits, do not clearly state this. Also, the NEC has not been enforcing this by including any conditions regarding the quality of fill that is imported into the NEP area in Development Permit conditions.

It is therefore recommended that an amendment be prepared for the NEP which will include a definition of inert fill that would specify that fill used in the NEP Area be “inert fill” as defined by the following definition. It is also recommended that a new set of Development Criteria be added to the NEP entitled “Site Alterations”.

| “Inert fill is material that satisfies the definition of Ontario Regulation 347, Section 1, “inert fill means earth or rock fill or waste of a similar nature that contains no putrescible materials or soluble or decomposable chemical substances, and has a contaminant level equal to or less than outlined in Table 1 of the “Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, March 9, 2004.” |

3. Exemptions to the Requirement for Testing Fill

The ability to implement the Development Criteria in the NEP is derived from conditions added to Development Permits. It is therefore recommended that a condition be added to Development Permits wherever fill is proposed to be imported into the NEP Area. This condition would specify the requirements for testing of the material, and would specify whether a protocol is required to ensure that the materials imported into the NEP Area satisfy the definition.

During the previous discussion of this issue, the question of exemptions to the principle of requiring all material to be tested was discussed. Staff was not recommending that material used for septic tanks be tested, since the public health department already regulates the types of materials used for septic tanks. And staff was not recommending that an applicant for a Development Permit for the construction of a building or a driveway, etc., which proposed to use only new material from a licensed quarry or pit as fill, be required to have that material tested. But if an applicant, in the construction of a building or driveway, proposed to import “fill” other than from a licensed quarry or pit, then a condition could be added to the Development Permit requiring that the fill be tested. A change to the
Development Permit Application will be required with regard to the disclosure of the source of any material to be imported to the site.

The importation of material for landscaping was also previously considered. Staff had recommended an exemption for “top soil”, but Commission members indicated that “top soil” could be used to construct very large berms or fill large depression areas, and that this might provide a loophole that would enable applicants to avoid the requirement to test the material they were using as fill.

The point of providing the exemption for landscaping was to clarify that applicants constructing vegetable or flower gardens, or landscaping around their dwelling for their own use, would not have to have imported fill tested. After further consideration, staff is recommending that since it is the regulations that specify under what conditions a Development Permit is needed, the regulations should be changed to clarify that landscaping is exempted from requiring a Development Permit. This has been the practice. The difficulty has been that it has been argued that some very large berms provided for screening and/or contour changes made as a result of pond construction are not development. This addition to the Regulations will clarify that berms provided for visual screening, retaining walls greater than 1 metre and significant contour changes are not landscaping for the purpose of exemptions, and therefore require a Development Permit.

The regulations now read -

5. The following classes of development, if listed as permitted uses under the land use policies established in the Niagara Escarpment Plan and not in conflict with a development permit issued under the Act, are exempt from the requirement of obtaining a development permit:

The following is suggested to be added as a new exemption:

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<th>36. Landscaping</th>
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<td>The planting and maintenance of grass, shrubs and other vegetation including the construction of raised beds or a surfaced walk in the immediate vicinity of a permitted use, but shall not include berms for visual screening or a retaining wall greater than 1 metre.</td>
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4. Development Permit Conditions for Requiring the Testing of Fill

The description of soils suitable for use as fill includes two criteria: a qualitative description of the material, and a quantitative description that limits the level of contaminants. Staff recommended that Table 1 of the “Soil,
Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, March 9, 2004", be used as the qualitative descriptions of inert fill.

Staff does not propose including the administrative details of how Table 1 will be enforced in the NEP. This type of detail is more appropriately decided by the conditions of Development Permits and administrative policy. Once the policy is adopted, staff will finalize an information sheet for applicants that will describe the requirements for testing. In this way, if changes to the policy are required, and it is found not to work, it can be easily changed. This policy would also address the requirement for testing of material that has been deposited on a property without a Development Permit. Attachment 1 -ADMINISTRATIVE GUIDELINES FOR IMPLEMENTING POLICIES ON FILLING, GRADING AND EXCAVATIONS – SITE ALTERATIONS sets out the policies proposed for adoption by the Commission.

Staff had recommended that applicants be required to obtain certification from a Professional Geoscientist or a Professional Engineer that certifies that the material has been tested in an accredited CAEAL laboratory and he/she certifies that the material to be transported onto the property is in compliance with Ontario Regulation 347 definition of “inert fill” and Table 1 of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, March 9, 2004.

In addition, staff had recommended that where the amount of fill was greater than 40 truck loads, the applicant should provide a protocol prepared by a Professional Geoscientist or a Professional Engineer that will ensure that all of the material to be transported onto the property is in compliance with the definition.

As an alternative, the Commission, at the last meeting that considered this issue, had suggested that every truck load of material should be tested. Staff has considered this approach and spoken to professionals in the field regarding this alternative but does not recommend this approach for the following reasons:

If an applicant approaches a reputable professional regarding the need for testing of material to be imported, that professional will consider the location and previous land use of the material to be imported. The site will be examined by the Professional for darker soils and for smells, and testing will be done at a variety of locations depending on the size of the site, but always including any suspicious areas. The number and type of parameters tested will depend on the location and former use of the site, however, for Table 1, testing should include hydrocarbons. We would not propose to tell the professionals what parameters to test. That would be up to them and we would not tell them how many tests to do. Again that would depend on the size of the site and the former land uses. Any liability for the qualification of a site as complying with Table 1 should be the
responsibility of the professional who determines the number of samples, the number of parameters tested, etc.

By requiring that the professional decide on the extent of testing, the NEC has a requirement that is geared to the nature of the site of the imported material and has a professional deciding on the number of parameters to be tested and the type of parameters, again dependent on the former land use of the site.

The requirement to get a professional to provide a certificate ahead of time is not based on the middleman who is only the transporter of the material or the testing of material on one truck; it is based on a fulsome evaluation of the site from which the material is derived.

If the NEC has a requirement that every truck load be tested, the applicant may get the impression that a sample from each truck could be tested, or that material already excavated could be tested. This is not a situation which should be encouraged, since, if the material is already on the truck, stained areas indicating hydrocarbons may be hidden or missed.

What the NEC wants is a test submitted prior to material being loaded onto a truck – so that the testing results are submitted and a Development Permit is then issued based on the receipt of the certificate.

The other difficulty with testing every truck load relates to what is to be tested. Table 1 has approximately 121 parameters. Generally, no one tests for all parameters. The approach that some land owners take is to require the testing of the same 20 or so parameters irrespective of the former use of the site, but this may miss high levels of chemicals from agricultural use. Professionals have advised staff that the number of parameters tested should be identified based on the site from which the material is taken.

The NEC does not want applicants to avoid testing because the requirements are unreasonable. What staff is proposing is already more onerous than any of the municipalities that were surveyed. Certification of one site may cost in the vicinity of $650 for 30 parameters but to test every truck load of material may cost $300 per truck load or $4500 for 15 truck loads.

One modification of the protocol that staff had formerly recommended is that where material is coming from more than one site, a certificate for each site should be obtained.

Staff is also recommending that for over 40 truck loads of material, a protocol must be developed and implemented to ensure that all of the material arriving on the site is from a certified site. This would include the
necessity of having a gate keeper who receives a bill of lading from an approved site for all of the material that is to be deposited on the site.

For “as built” applications, where an applicant has already had material deposited on their property, the requirement would be for the applicant to obtain certification that the material satisfies the definition of inert fill. In this case, staff is recommending again that a Professional Engineer or Professional Geoscientist be required to provide certification that the material meets the requirements of the NEP and the definition of “inert fill”. It would be the professional who would decide how many samples should be obtained and tested depending on the amount of material and the stated source.

5. Proposed Niagara Escarpment Plan Amendment and Interim Policies on Filling, Grading, Excavations – Site Alterations

In the Staff Report dated October 17, 2007, staff noted that there are policies in the NEP now directed to contour changes, etc.; however, additional policies were suggested to minimize the visual impact of development. It had been suggested that the NEC adopt these policies, implement them, and then consider whether to adopt them as an amendment to the NEP.

Staff is now recommending that the Commission adopt the policies now to be used as guidelines and that an amendment be prepared that incorporates these polices and the requirement for an Environmental Impact Assessment (EIA) under the one topic of Site Alterations. The Commission had already approved, in a policy report, the preparation of an amendment to the NEP that would specify when an EIA would be required. In this way, the proposed amendment would be circulated and advertised and the Commission would have the benefit of comments from agencies, municipalities and the public on these two topics.

Attachment 2– GUIDELINES ON FILLING, GRADING AND EXCAVATIONS – SITE ALTERATIONS IN THE NIAGARA ESCARPMENT PLAN AREA is proposed as the policy to be adopted now. This policy will form the basis of an amendment to the NEP.

In preparing the NEP amendment, staff will revisit the issue of identifying when an EIA is required. The amendment will specify that if development is proposed in Escarpment Natural Areas or within the Minimum Areas of Influence of key natural features such as outlined in the ORMCP, an EIA will be required. The proposed amendment will also identify policies with regard to Minimum Vegetative Protective Zones such as are included in the ORMCP, and it will specify what should be included in the EIA. For now, the policy simply states that generally, an EIA is required when development is proposed in Escarpment Natural Areas.
Summary

In order to deal with the issues that have arisen regarding filling, grading, and excavation – site alterations in the Niagara Escarpment Plan Area, the following actions are recommended.

1. Initiate a change to Ontario Regulations 828/90 that would specifically identify Landscaping as not requiring a Development Permit while at the same time, clarify that berms created as visual screening or a retaining wall greater than 1 metre, would require a Development Permit.

2. Prepare an amendment to the NEP that includes a definition of “inert fill” and adds a section to Part 2 of the NEP, Development Criteria entitled “Site Alterations”.

3. Adopt policies to be used until the NEP amendment is approved that require a Development Permit condition that requires all fill to be tested to ensure that it would satisfy the definition of inert fill, and prepare a Guideline to be handed out to the public to explain the Commission’s policies and requirements. The Guideline would include the policies outlined in Attachments 1 and 2.

Recommendations

Staff recommends that the NEC adopt the following recommendations for future action and guidance.

1. Direct staff to initiate a change to Ontario Regulations 828/90 to add “landscaping” as a category of development that is exempted from requiring a Development Permit, while clarifying that berms created as visual screening and retaining walls greater than 1 metre, would require a Development Permit.

36. Landscaping

The planting and maintenance of grass, shrubs and other vegetation, including the construction of raised beds or a surfaced walk in the immediate vicinity of a permitted use, but shall not include berms for visual screening or a retaining wall greater than 1 metre.

2. Direct staff to prepare an amendment to the NEP to include a definition of inert fill and Development Criteria on Site Alterations based on Attachment 2. The amendment will also include the situations under which Environmental Impact Assessments are required and specify the nature of those Assessments.

When an amendment is initiated, it should be made clear that if site alterations are within the Minimum Areas of Influence, such as
outlined in the ORMCP, an EIA would be required. The proposed amendment should also consider establishing a Minimum Vegetative Protective Zone such as is included in the ORMCP.

3. Direct staff to add a condition to Development Permits where fill (other than fill used for septic tanks or construction material from licensed quarries or pits) is proposed to be imported onto a site, that it meet the following definition of inert fill and that for every site that is a source of fill, that it be certified by a Professional Engineer or Geoscientist that the fill has been tested by an accredited CAEAL laboratory and conforms to the definition of “inert fill” from the Ontario Regulation 347 and Table 1 of Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, March 9, 2004, as outlined in Attachment 1.

4. Adopt Attachment 2 - GUIDELINES ON FILLING, GRADING AND EXCAVATIONS – SITE ALTERATIONS IN THE NEP AREA to be used as a policy along with the Niagara Escarpment Plan in the consideration of Development Permit Applications.

5. Direct staff to prepare an information sheet based on Attachments 1 and 2 which would advise the public of the Commission’s position on filling, grading and excavation – site alterations and circulate this information sheet to all municipal building departments for their information.

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ATTACHMENT 1

ADMINISTRATIVE GUIDELINES FOR IMPLEMENTING POLICIES ON FILLING, GRADING AND EXCAVATIONS – SITE ALTERATIONS

1. A Development Permit is needed for all development including filling, grading and excavations, unless it is specifically exempted by Ontario Regulation 828/90 as amended, or unless it is landscaping.

Landscaping is the planting and maintenance of grass, shrubs and other vegetation, including the construction of raised beds or a surfaced walk in the immediate vicinity of a permitted use, but shall not include berms for visual screening or a retaining wall greater than 1 metre in height from the existing grade.

2. Whenever a Development Permit is required that purports to import material onto a lot, only material from a licensed pit or quarry, or "inert fill" that satisfies the definition below is acceptable.

“Inert fill" is material that satisfies the definition of Ontario Regulation 347, Section 1, “inert fill means earth or rock fill or waste of a similar nature that contains no putrescible materials or soluble or decomposable chemical substances, and has a contaminant level equal to or less than outlined in Table 1 of the “Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, March 9, 2004”.

3. In order to ensure that material imported onto a lot satisfies the above noted definition, a condition will be added to all Development Permits that propose to import material other than construction/building material from a licensed pit or quarry that, prior to the Development Permit being issued, certification shall be obtained from a Professional Engineer or Professional Geoscientist that the material to be imported has been tested in an accredited CAEL laboratory and he/she certifies that the material is in compliance with the definition of inert fill and Table 1 of the “Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, March 9, 2004”.

The applicant will be required to obtain, from a Professional Engineer or Professional Geoscientist, and implement a protocol which will ensure that every truck load of material to be deposited satisfies the definition above. This protocol will establish a ticketing or bill of lading system and will require a gate keeper to ensure that the material to be imported comes from certified sites. An applicant will be required to commit to implementing the protocol.
5. After this guideline is adopted, if material that has not been certified as inert fill is deposited on a lot, and the applicant applies to have a Development Permit issued as an “as built”, he/she will have to obtain a certificate from a Professional Engineer or Professional Geoscientist that certifies that the material has been tested by an accredited CAEL laboratory and he/she certifies that the material is in compliance with the definition of inert fill and Table 1 of the “Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, March 9, 2004”, prior to the Development Permit being issued.

6. In addition to the policies of the Niagara Escarpment Plan, Niagara Escarpment Commission staff will consider the attached Guidelines on Filling, Grading and Excavations – Site Alterations in the NEP Area in their consideration of whether or not a Development Permit will be issued for such proposed Development.
2.17 Site Alterations

The objective is to ensure that new development does not result in substantial contour changes, environmental contamination and/or, environmental degradation, or affect the open landscape character of the Escarpment environment.

**Contour Changes**

1. Development shall be located to maintain Escarpment Related Landforms including kettles, crevices and karst features in their undisturbed form.

2. Development shall be designed to utilize the existing topographic conditions and to minimize grading and the placement of fill/excavations.

   Notwithstanding the above, where contour changes are proposed to agricultural lands development may be permitted to the extent that the agricultural value of the land is enhanced.

3. Changes to the natural drainage pattern shall be avoided; in particular, water from one drainage or subdrainage system shall not be directed to a different system, and water from one lot shall not be directed onto another lot as a consequence of development, nor should water previously draining to one lot be redirected from that lot.

4. Development which proposes substantial contour changes to mitigate the adverse impacts from permitted uses, such as quarries, shall only be permitted where plant material alone will not provide sufficient screening, either within a reasonable time period or at maturity.

5. Where material has been excavated on a property, it shall be graded to avoid changes to the natural drainage, to minimize contour changes and to protect existing vegetation.

6. Where contour changes are proposed, a grading plan shall be provided showing the existing and proposed contours, the existing vegetation, the proposed relocation of any excavated materials and the proposed location of any material to be
imported. The existing and proposed drainage should be identified.

**Environmental Contamination**

1. All material to be imported onto a lot, except material from a licensed pit or quarry, shall satisfy the definition of “inert fill”.

**Environmental Protection**

1. Generally, all development in Escarpment Natural Areas will require an Environmental Impact Assessment (EIA).

**Landscape Character**

1. New development should be located on a lot to preserve the open landscape character, natural scenery and view(s) of the Niagara Escarpment and land in its vicinity.

2. Buildings/structures should be sited wherever possible so that they will not extend above the Escarpment Brow when the development is on the Escarpment Slope.

3. Existing vegetation should be retained and used to screen new development.

4. Development should be clustered and located on the edge of meadows, near hedgerows or wooded areas to retain the overall open landscape character of the Escarpment Environment and land in its vicinity.

5. Access roads should be aligned with the slope rather than perpendicular to the contour lines, to minimize excavations and site alterations.

**Definitions to be Added to The NEP**

“Inert fill” is material that satisfies the definition of Ontario Regulation 347, Section 1, “inert fill means earth or rock fill or waste of a similar nature that contains no putrescible materials or soluble or decomposable chemical substances, and has a contaminant level

*When an amendment is initiated, it will outline when an EIA is required. It will specify that if development is proposed in Escarpment Natural Areas or within the Minimum Areas of Influence of key natural features such as outlined in the ORMCP, an EIA will be required. The proposed amendment will also identify policies with regard to a Minimum Vegetative Protective Zone such as are included in the ORMCP.*
equal to or less than outlined in Table 1 of the “Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, March 9, 2004”.

Definitions in The NEP

**Escarption Brow (Edge)** - the uppermost point of the Escarpment slope or face. It may be the top of a rock cliff, or where the bedrock is buried, the most obvious break in slope associated with the underlying bedrock.

**Escarption Environment** - the physical, natural, visual and cultural heritage features associated with the Escarpment landscape.

**Escarption Related Landforms** - the physical features of the land associated with the Escarpment and created by erosion, sedimentation and glaciation, often including such features as moraines, lakes, river valleys, beach ridges, drumlins and kames.

**Escarption Slope (Face)** - the area between the brow and toe of the Escarpment and usually characterized by a steep gradient. Where the rise occurs in the form of a series of steps, the slope also includes the terraces between the steps.

**Open Landscape Character** - the system of rural features, both natural and human-made, which makes up the rural environment, including forests, slopes, streams and stream valleys, hedgerows, agricultural fields, etc.