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**Niagara Escarpment Commission**

**Landscape Plan Technical Criteria**

**FINAL DRAFT**

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# BACKGROUND

A landscape plan is a two-dimensional plan drawing that illustrates proposed landscaping and specifies materials and techniques for landscape construction.

This document is to be read in conjunction with the Niagara Escarpment Plan (NEP)[[1]](#footnote-1). The NEP contains policies for the protection of natural heritage features and functions, and the conservation of landform and scenic resources. The objectives of the NEP include protection and enhancement of natural heritage features and their functions and preservation of natural scenery and the open landscape character of the Escarpment landscape (see Appendix A).

# 2.0 REQUIREMENT

A landscape plan may be necessary to ensure NEP policies are met. It may be required as part of an application for a Niagara Escarpment Commission (NEC) Development Permit or other applications under the Planning Act and other provincial and federal legislation for proposed development within the NEP Area.

A landscape plan will be required where it has been determined that planting, seeding, or other site restoration work is required to mitigate visual impacts, enhance the Escarpment landscape, and/or rehabilitate or buffer natural areas. The landscape plan specifies how such proposed works will be implemented.

The determination that a landscape plan is necessary is made by NEC staff in consultation with other agencies. Where applicable, the landscape plan may be included in the scope of a technical study such as a *visual impact assessment* (VIA), *vegetation protection plan* (VPP), or *environmental impact study* (EIS).

All landscape plans must be coordinated with technical studies and demonstrate conformity to NEP policies. To simplify approvals, it is recommended that such plans also comply with other relevant requirements, including those of municipalities and conservation authorities. Where NEC criteria for landscape plans differ from those of other relevant government agencies, the most stringent requirements will apply.

These technical criteria provide general expectations regarding landscaping and landscape plan preparation that are acceptable to the NEC and are used by staff to assess the technical merits of proposed development in the NEP Area. Key landscaping objectives and project-specific criteria should be confirmed in consultation with both NEC staff and regulatory agencies before preparing a landscape plan.

# 3.0 EXPERTISE

Where a landscape plan is required, the applicant must employ the services of a qualified professional with relevant expertise in landscape planning and planting design to prepare the landscape plan, ideally a Landscape Architect that is in good standing with the Ontario Association of Landscape Architects (OALA).

A landscape designer, horticultural professional, or ecologist may be considered a suitable alternative to a Landscape Architect, depending on specific circumstances. Applicants are advised to discuss expertise requirements with NEC staff.

Qualified professionals are encouraged to visit the site, familiarize themselves with the existing conditions, and review relevant plans and policies before drafting the landscape plan.

# GENERAL CRITERIA

This section outlines general landscaping requirements to protect and enhance the Escarpment’s natural environment and to optimize plant survival. General criteria apply to all landscape plans.

* All trees and shrubs shall be *native plant species* representative of local existing vegetation communities and natural areas. *Non-native*, c*ultivar* and *invasive plant species* will not be accepted. Native plant lists may be available from local conservation authorities.
* All trees and shrubs shall be nursery grown and conform to the Canadian Nursery Landscape Association: Canadian Nursery Stock Standard, current edition ([www.cnla.ca/training/cnss](http://www.cnla.ca/training/cnss)). Field or bush dug material will not be accepted.
* To optimize plant establishment and longevity, all planting works (including plant hole and bed preparation, planting, mulching, staking, and clean-up), seeding and sodding, and maintenance shall conform to the Canadian Landscape Standard, current edition ([www.cnla.ca/training/canadian-landscape-standard](http://www.cnla.ca/training/canadian-landscape-standard)).
* Outside of conventional lawn areas, all disturbed areas are to be topsoiled and seeded with native seed mix. All seed mixes should be locally native and well-suited for site conditions. Seeding of a nurse crop is encouraged. Allelopathic or invasive cover crops (e.g., annual ryegrass, perennial ryegrass) will not be accepted.
* Conventional sod will not be accepted in or near natural areas or in areas regulated by conservation authorities.

**5.0 SPECIFIC CRITERIA**

This section outlines specific requirements for screen planting, enhancement planting, and rehabilitation/buffer planting, as well as requirements for lighting plans. Applicants are encouraged to confirm with NEC staff which of the following apply and consult with the appropriate agencies.

## 5.1 Screen Planting

Where screen planting is required for the purposes of mitigating the visual impact of development on the Escarpment’s natural scenery, the landscape plan is subject to direction from NEC staff and shall be informed by the findings of a visual impact assessment (VIA), where applicable.

Screen planting shall be:

* situated to effectively obstruct sightlines to proposed development from public lands, roads, trails, and waterways
* arranged in natural-looking groupings, unless it can be demonstrated that screening objectives are met with an alternate arrangement
* a mix of native deciduous and coniferous (evergreen) trees, with shrubs supplementing the screening effect, where necessary
* large deciduous trees with a minimum *caliper* size of 50 mm
* tall coniferous trees with a minimum height of 1800 mm
* spaced appropriately to meet screening objectives, which may require spacing large deciduous trees no more than 5 metres apart (on-centre) and tall coniferous trees no more than 3 metres apart (on-centre)

## Enhancement Planting

Where enhancement planting is required for the purposes of protecting and enhancing the Escarpment landscape, the landscape plan is subject to direction from NEC staff and shall address both municipal or conservation authority tree replacement requirements (e.g., quantity, size, species) and be consistent with the recommendations of an arborist report and/or *vegetation protection plan* (VPP), where applicable.

## 5.3 Rehabilitation and/or Buffer Planting

Where rehabilitation and/or buffer planting is required for the purposes of protecting, maintaining, and enhancing *vegetation protection zones* (VPZ) and natural features, the landscape plan is subject to direction from NEC staff, shall address municipal and conservation authority requirements, where applicable, and shall be consistent with the recommendations of any technical studies (e.g., EIS, natural heritage evaluation) and high-level plans (e.g., subwatershed study).

Specific requirements for soil management, planting, seeding, post-planting care, wildlife habitat features, timing windows, and more, will be determined on a site-by-site basis. Disturbance to native soils and natural vegetation is to be minimized, planting is to be established and maintained as natural, *self-sustaining vegetation*, and topsoil is to be stabilized to prevent erosion and sedimentation within the current year’s growing season.

## 5.4 Exterior Lighting

Excessive outdoor lighting is both a visual and natural heritage concern. Excessive night lighting contributes to light pollution, which may spill into natural areas, and can have the effect of creating unnatural glare in the landscape. In addition, nocturnal species such as owls and bats, and migrating birds are negatively impacted by artificial light. The consideration of dark sky principles and the use of the right light, in the right place, at the right time is encouraged.  In keeping with the NEP, applicants are required to minimize the effect of lighting through the selection of appropriate light fixtures (e.g., shielded, downward-directed) and the appropriate placement and operation of lights to mitigate environmental and visual impacts.

Light fixture type, height, and layout may be shown on the landscape plan and/or other drawings such as architectural plans and elevations. In some circumstances, more detailed lighting information may be required such as light levels and light distribution mapping (e.g., photometrics) and operational settings (e.g., brightness, timers, sensors, hours of operation).

Digital screens and illuminated signage are considered a light source and are subject to the same considerations as other light sources (e.g., building lights, driveway lights, security lights, sports field lights, street lights, pool lights, pathway and other landscape lighting). The use of accent lighting (e.g., soffit lighting, flood lighting) on upper levels of buildings is strongly discouraged.

Electrical diagrams are not required and will not be reviewed by NEC staff.

# 6.0 SUBMISSION FORMAT

Depending on the size or complexity of the development proposal, a landscape plan may be a stand-alone drawing or the information may be included on a *site plan*. A typical landscape plan shall include, but not be limited to, the following:

* Title block with plan information (north arrow, written scale, bar scale, key plan, project address, NEC application number, date, revision number/date) and professional’s name, qualifications and contact information
* The location and description of:
  + Property boundaries, *development envelope* and any construction access routes, storage and stockpile areas
  + All existing natural features and associated setbacks (e.g., top of bank, watercourses, *vegetation protection zone*, etc.)
  + Existing vegetation to be retained or removed
  + Protection measures for existing vegetation to be retained and erosion control measures
  + All existing and proposed structures and features (e.g., dwelling, pool, sports court, septic system, etc.)
  + All proposed plant material, planting beds and sodded or seeded areas
  + All hard surfaced areas (e.g., driveways, walkways, parking areas, patios, etc.)
  + All exterior and landscape lighting (including type of fixture) – note, all lighting should be downward-directed and shielded.
  + All signage (including height and materials)
  + All fences and retaining walls (including height and materials)
  + Above and below ground utilities (e.g., light standards, hydro poles, etc.)
  + Stormwater management and *low impact development* features
* Detailed plant list itemizing botanical name, common name, quantity, size, condition and spacing of all proposed plant material
* Planting notes and details (e.g., plant installation, timing of proposed works, maintenance, etc.)
* Seeding notes and details (e.g., species mix, nurse crop, distribution method, application rate, and site preparation)
* Proposed grades, finished floor elevation, existing grades
* General notes and details
* Drawn to scale with all measurements in metric

More detailed landscape plans may be required to satisfy agency requirements. Applicants are encouraged to review the specific requirements with NEC and agency staff.

A digital PDF format is acceptable provided that the drawing is legible and sized appropriately to print to-scale. A hard copy of larger drawing sets may be requested.

# 7.0 REVIEW AND APPROVAL PROCESS

The typical approval process for a landscape plan follows these steps:

1. Pre-consultation with NEC staff is strongly encouraged. NEC staff may advise of any constraints or conditions to be met.
2. The landscape plan is reviewed by NEC staff and may be circulated to other agencies where a coordinated review is required. NEC staff will supply comments. Resubmission of the landscape plan may be required. Note, an incomplete submission may delay this review or decision on an application.
3. Once the landscape plan is approved by NEC staff and other agencies as necessary, the landscape plan will be incorporated into the set of permit documents.
4. The approval of the application will be subject to conditions, including, but not limited to, implementation of the landscape plan. All work shall be installed as specified including replacement of plant material, certification of completed works by a qualified professional, and NEC notification.

If the landscape plan is not approved by NEC staff, staff may recommend refusal of an application.

# 8.0 IMPLEMENTATION OF THE LANDSCAPE PLAN

Once the appropriate permits have been issued, all work shall be installed as specified in the development permit including the landscape plan. Any changes to the proposed work require NEC staff review and approval prior to implementation. Failure to undertake development in accordance with a development permit is an offence under the *Niagara Escarpment Planning and Development Act* (NEPDA). For best results, landowners and developers should provide all builders and subcontractors with a copy of the approved landscape plan before they start their work.

The following criteria apply to the implementation of the landscape plan and should be reflected in the landscape plan notes and details:

* No tree removal, vegetation clearing, or other site alteration is to commence until a permit and all other approvals are in place.
* Protective barriers shall be installed prior to the commencement of any construction. The applicant is responsible for ensuring that protective barriers remain in good condition throughout the construction period. If there is damage to a barrier, all work shall stop until the barrier is properly repaired.
* Unless otherwise specified, planting and rehabilitation of all disturbed areas shall be completed by the end of the first growing season following the completion of site servicing, grading, and building construction.
* Consideration shall be given to the appropriate time of year to undertake the proposed works. Sensitive timing windows for wildlife are to be avoided, unless otherwise directed. Deciduous trees and shrubs are best transplanted in the fall after leaf drop or in the spring before leaves emerge. Conifers are best transplanted in the spring. Oaks can only be planted in the spring.
* All changes, including plant substitution, shall be approved the NEC staff or other authorities prior to installation.
* All plant material shall be guaranteed for 24 months following installation. All plant material found during this time to be dead or dying must be replaced with a size and species to the satisfaction of the NEC.
* Upon completion of landscaping, a letter certifying the landscaping has been completed in accordance with the approved landscape plan shall be provided to the NEC by a qualified professional.

# 9.0 GLOSSARY OF TERMS

**Caliper:** The diameter of nursery-grown trees in accordance with the Canadian Standards for Nursery Stock. Trees less than 100mm are measured at 15 cm above grade; trees more than 100mm are measured at 30 cm above grade.

**Cultivar:** A plant variety developed from a native species and maintained under cultivation. Cultivars of native plants (‘nativars’) are widely available, however, may not provide the same ecological benefits as the native species.

**Development envelope:** The total land area required to complete all of the proposed works including tree removal, construction staging and access routes, building, site alteration, and servicing. Development envelope is to be indicated on plan drawings.

**Environmental impact study (EIS):** A study that assesses the potential impacts to the features and functions of the natural environment from proposed development. Terminology varies across jurisdictions (e.g., environmental impact assessment, natural heritage evaluation).

**Invasive Plant Species**: Harmful, non-native trees, shrubs, and herbaceous plants that invade natural ecosystems and pose a threat to native vegetation and wildlife. Resources are available through the Ontario Invasive Plant Council at [www.ontarioinvasiveplants.ca](http://www.ontarioinvasiveplants.ca), the Ministry of Natural Resources and Forestry at [www.ontario.ca/page/invasive-species-ontario](http://www.ontario.ca/page/invasive-species-ontario) and through local conservation authorities.

**Low impact development (LID):** Construction and building methods that filter, store, and return rainwater and snow melt to the ground. LID solutions such as bio-swales and rain gardens are encouraged where the use of impervious surfaces cannot be minimized. For more information, refer to [www.sustainabletechnologies.ca/low-impact-development](http://www.sustainabletechnologies.ca/low-impact-development).

**Native plant species:** A plant species that existed in an area for millenia and evolved in the presence of native soils and climate, forming part of a naturally-occurring plant community. Resources may be available through local conservation authorities.

**Non-native plant species:** A plant species that does not originate from a specified area (e.g., Ontario). May be described as ‘introduced’.

**Site Plan:** A scaled, two-dimensional plan drawing that identifies the accurate location of proposed development, existing vegetation, structures, and utilities.

**Vegetation protection plan (VPP):** A scaled, two-dimensional plan drawing that identifies the accurate location of existing vegetation, vegetation proposed to be removed and protected, and vegetation protection measures.

**Vegetation protection zone (VPZ):** As defined in the NEP, a VPZ is a vegetated buffer area surrounding a *key natural heritage feature* or *key hydrologic feature* within which only those land uses permitted within the feature itself are permitted.

# 10.0 NOTES

Niagara Escarpment Commission (NEC) will, from time to time, update this document to reflect current policies, practices, and processes. The revision date will be noted on the document and the most current version will be available for download from the NEC website at [www.escarpment.org](http://www.escarpment.org).

# APPENDIX A: POLICY CONTEXT

Provincial Policy Statement (PPS)

The PPS (2020) calls for the long-term protection of natural features and areas and the maintenance of the long-term ecological function and biodiversity of natural heritage systems. Part 2.1 identifies that development and site alterations shall not be permitted in significant woodlands, wetlands, valleylands, wildlife habitat or Provincially Significant Areas of Natural and Scientific Interest (ANSIs), and adjacent lands, unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

Niagara Escarpment Plan (NEP)

The need to minimize or avoid the impact of development is inherent in the NEP. The Purpose provides for the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment and ensuring compatible development. The Objectives speak to the protection of unique ecologic areas, maintaining and enhancing the quality and character of natural streams and water supplies, and maintaining and enhancing open landscape character through compatible farming, forestry and by preserving natural scenery.

Land use designations and permitted uses contained in Part 1 identify the types of development that may be permitted. The Development Criteria contained in Part 2 of the NEP set out how development should be implemented. Part 2.13 contains policies to ensure that planning, design and construction practices protect landforms and are compatible with natural scenery and the open landscape character. These Development Criteria also deal with new planting of native species for screening, grading, use of excavated materials on site, the need to minimize contour changes and providing a proper grading/drainage plan where necessary to address proposed grading and use of fill material.

Many other Development Criteria deal with matters that could be included within the scope of a landscape plan including: protection of natural heritage features; minimizing impact and disturbance; providing for site stabilization (during and after construction); and, establishment/maintenance of buffers and setbacks which may be required to protect natural features.

1. Niagara Escarpment Plan (2017) as amended; Ontario; Order in Council No. 1026/2017; Office Consolidation December 21, 2018. Available for download at [www.escarpment.org](http://www.escarpment.org). [↑](#footnote-ref-1)