

18.0

Stewardship of the University Green Network and Nature Areas

The Symons Campus lands are a precious asset the University seeks to steward, develop, and preserve in ways that support the long-term sustainability of Trent, our local, national, and international communities, and the environment around us. Trent recognizes its role as a steward of the land, and intrinsic to this, its responsibility to future generations.

Stewardship of the Symons Campus will be primarily achieved through the implementation of the University Green Network (UGN) and the Nature Areas Stewardship Plan. General guidance is provided below for the UGN with more detail for specific features or considerations that merit attention.

18.1 A Connected Natural Network

The University Green Network is a dynamic system that builds on provincial and municipal policy and environmental study to create a robust and connected natural system on the Symons Campus. A number of sources contribute to understanding of the natural heritage features, including their connections and significance, on the Symons Campus. This information will continue to evolve, and as projects move forward, capturing and documenting current information and research must be a priority.

Policy and regulation: In accordance with the requirements of the Provincial Policy Statement, the City of Peterborough draft Official Plan identifies a Natural Heritage System. At the time of the TLNAP preparation, the 1981 Official Plan remains in-force and as such, is used as current policy guidance. The TLNAP has regard for the draft Official Plan, including the identification and policies pertaining to a Natural Heritage System, and includes flexibility to adapt to and address changes in policy throughout the life of the TLNAP.

The City's Natural Heritage System can be integrated into mapping and decision-making, as appropriate, through the Systems-Level Plan and will be addressed through site level plans and processes (e.g., Nature Area Management Plans, Environmental Impact Studies).

Systems-based planning: A systems-based approach will inform the planning and stewardship of the UGN. This approach will be guided by provincial guidance documents (existing and as may be updated or created in future) including, but not limited to the Natural Heritage Reference Manual (MNR 2010), the Significant Wildlife Habitat Technical Guide for Ecoregion 6e (MNR 2015) and the Significant Wildlife Habitat Mitigation Support Tool (MNR 2014). Systems-based planning will also be informed by current best practices, available research and existing studies or initiatives as may be available (e.g., Kawarthas, Naturally Connected, 2012), as appropriate.

The significant role of wetlands: Wetlands are a prominent and important feature across the Symons Campus. Most of the wetlands present on campus are 'unevaluated', which means they have not yet been assessed to determine their significance.

Wetlands are presumed to be Provincially Significant until evaluated using the Ontario Wetland Evaluation System. An evaluation of Significance may be conducted by those certified, and confirmed by the Ministry of Natural Resources and Forestry, or may be conducted by the Ministry of Natural Resources and Forestry directly. Upon confirmation of Significance, the wetland will be recognized in provincial records and mapping available to the public.

It is anticipated that wetlands will be evaluated through environmental studies that are either prepared in support of Management Plans for the Nature Areas, or prepared to inform future planning on adjacent lands.

Development or site alteration proposed to occur within 120m of a Provincially Significant Wetland (PSW) will trigger site-specific assessment to determine potential risk of impact to the wetland and inform planning, design, and mitigation to protect its form and function. All wetlands, including non-provincially significant wetlands, are regulated by Otonabee Conservation under Ontario Regulation 167/06 *Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*.

18.2 Developing a System-Level Plan

Implementation and stewardship of the University Green Network (UGN) will be guided through the System-Level Plan. Section 14.1 of the TLNAP provides general direction for the Systems-Level Plan and is to be considered in conjunction with the information presented here. To support the preparation of the plan, guidance has been provided through a preliminary Terms of Reference, which includes some key elements of the UGN (refer to Appendix A for more details).

The System-Level Plan will provide direction that considers existing form and function, and identifies opportunities that support the system through the three components of the UGN: Natural Features and Areas, Ecologically Supportive Features and Areas, and Hydrologically Supportive Features and Areas.

System connectivity is to be a primary priority of the System-Level Plan. A robust natural system requires that plants, animals, and materials can move between features and more broadly across the landscape. Through the TLNAP, two approaches are proposed: creation of corridors, and wildlife road mitigation measures.

Proposed Wildlife Movement Corridors

Movement and dispersal of species (plants, animals) occurs within and between natural features across the Symons Campus. Movement within natural features and Nature Areas is to be maintained. In addition, two corridors which will connect features across the landscape are proposed to be established on the Symons Campus, outside of the Nature Areas, to support and enhance connectivity across the UGN (refer to Figure 13 in Section 6.0). These proposed corridors will improve connectivity between natural features of the UGN to support a connected system. This will be achieved by establishing self-sustaining vegetation and some limited permeable landscape types to create corridors that support movement of plants and animals.

Corridor widths are to be recommended through the System-Level Plan or through a targeted study, based on available funding and resources, and should address any specific needs (e.g., targeted study or assessment to identify target species), as appropriate.

To the extent feasible, Trent should seek to establish these corridors on the landscape outside of development processes; if possible, restoration work within corridors are to be completed 1 year or more in advance of development activity to allow for the establishment and acclimatization of local species.

Planning and Designing Proposed Corridors

The following guidance is given to inform the planning and design of the two proposed corridors, outside of the Nature Areas, to be established to support the UGN (Figure 13 in Section 6.0).

Corridor Width

- » Total corridor width is to be informed by target species for movement through the corridor.
- » Identify a minimum vegetated width.

Permeable, Non-Natural Uses

Some permeable, non-natural uses may be permitted in portions of the corridor. Appropriateness, type, and placement is to be confirmed through planning and design. Uses may include:

- » Naturalized gardens or landscaping which utilizes native species.
- » Small-scale, regenerative food production.
- » Swales or other naturally design stormwater facilities, as appropriate.
- » Depending on the proposed corridor width, a trail may be permitted to occur through an outer edge of the corridor. Trail design must not result

in impact(s) to the function of the corridor (e.g., lighting impacts).

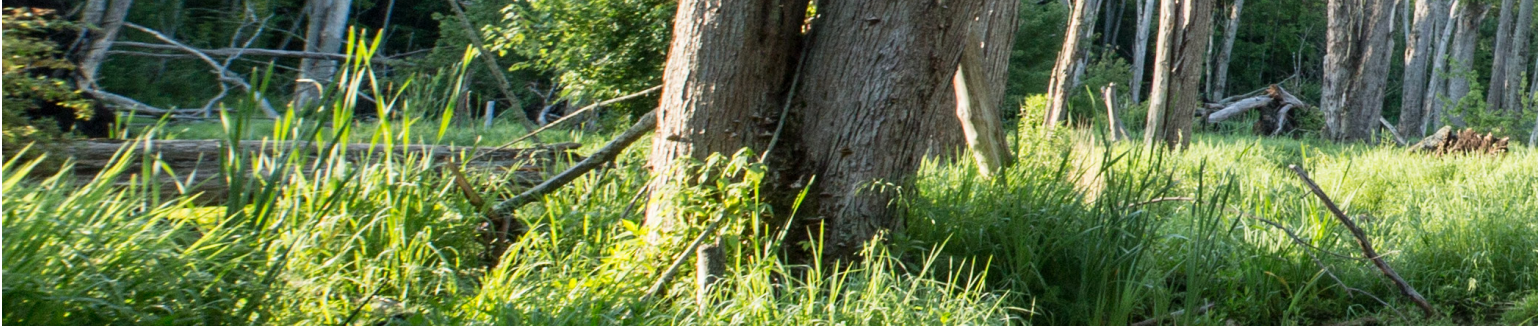
In considering these permeable uses, the following general guidance applies:

- » The function of the corridor is to be preserved.
- » They are not to extend across the width of the corridor.
- » They should not make up more than 30% of the entire corridor area.

Infrastructure and Corridors

The Mobility Plan identifies major road connections that are required to facilitate circulation and servicing connections on the Symons Campus (refer to Figure 27, Section 8.0). Additional crossings beyond those depicted are to be avoided to the degree feasible, and alternatives should be considered through land use planning. Where crossings occur, impacts are to be minimized and mitigated through:

- » Modified construction methods, materials or design (e.g., lighting).
- » Mitigation measures to maintain connectivity (e.g., culverts or crossing structures) or avoid impact (e.g., exclusion fencing at a road crossing).



Road Mitigation Measures for Wildlife

Areas of known or potential conflict between wildlife and roads (e.g., road mortality, movement) have been identified on the Framework Plan and UGN mapping in the TLNAP. Most of the road infrastructure on the Symons Campus is owned and maintained by the City of Peterborough. Trent will engage with the City on infrastructure projects and advocate for the implementation of wildlife mitigation measures.

Some opportunities may be identified outside of planned infrastructure projects (e.g., signage, reflectors, road paint, etc.).

Trent will work with the City to explore opportunities to improve connectivity across roads within the Symons Campus.

Developing Targets and Actions.

The Board of Governors has committed to maintain 60% of the Symons Campus as Nature Areas and green space. This is achieved through the TLNAP. The introduction of the UGN provides an opportunity to develop refined targets that reflect existing conditions and consider a suite of actions that will effectively contribute to Trent's goal of enhancing biodiversity on campus. Trent is committed to maintaining and striving for regenerative actions to support biodiversity across the Campus.

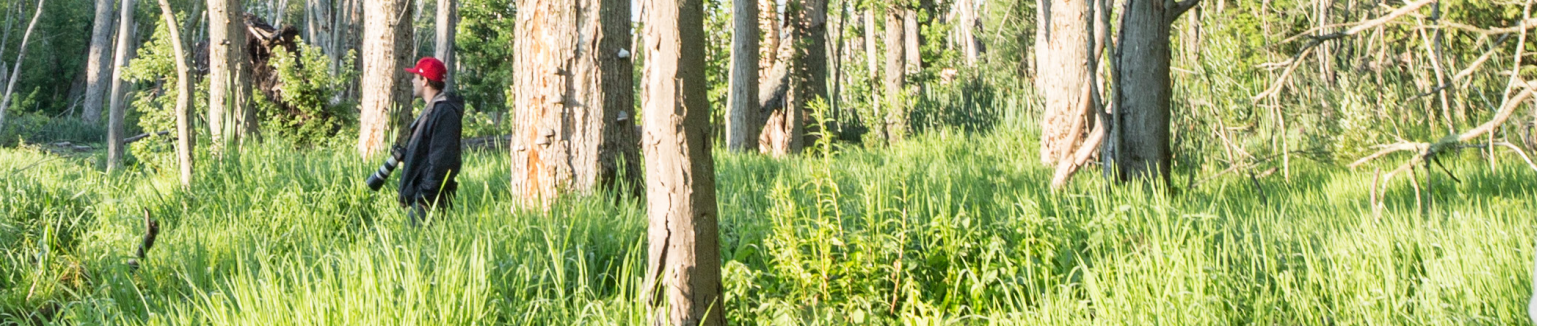
Through the preparation of the System-Level Plan, targets are to be developed which provide direction and assist that University in achieving a regenerative campus. Targets and actions for each element of the UGN should be established with a focus on maintaining, enhancing, and striving for a net benefit to support a resilient and sustainable environment. These targets and actions are to be informed by:

- » An analysis of the existing natural cover on the Symons Campus;
- » Relative representation of features on the Symons Campus within the context of the City of Peterborough and the Otonabee Watershed; and
- » Guidance documents, including *How Much Habitat is Enough* (ECCC 2013).

Targets and actions will be established for each component of the UGN. To ensure / support continuity from the TLNAP through to the preparation of targets, targets developed through the System-Level Plan should at a minimum consider the following:

Natural Features and Areas

- » Natural vegetation cover target(s) which support habitat diversity and assist in directing restoration and enhancement efforts, with focus on opportunities presented within the Nature Areas.



- » Target(s) that maintain or increase native biodiversity within the Nature Areas.
- » Target(s) that support protection and diversity of Species at Risk on the Symons Campus.

Ecologically Supportive Features and Areas

- » Target(s) that strive to increase native biodiversity on the Symons Campus.
- » Expand on guidance of the TLNAP for nature-inclusive design elements with target(s) for new initiatives and within the existing campus.
- » Target(s) that support the objectives of the TLNAP to increase exposure to Indigenous Traditional Knowledge and ways of knowing.
- » Target(s) that support system connectivity.

Hydrologically Supportive Features and Areas

- » Target(s) that focus on maintaining hydrologic functions important for ecological functions present on the campus. These may include consideration for permeable surfaces, low impact development and green infrastructure elements.

Opportunities to align targets and actions with the University's core mandate, engage students in stewardship and provide space to innovate, conduct research, and demonstrate leadership in the environment should be woven into the target(s) wherever possible.

Indigenous Traditional Knowledge & Cultural Sites

- » Indigenous Traditional Knowledge (ITK) holds an important place in environmental and ecological understanding and should be combined with western science to develop a holistic view of the natural system and its functions. The System-Level Plan should integrate:
 - » Findings from the Archaeological Master Plan and a culturally-appropriate management approach in consultation with the Michi Saagiig Consultation Officers and Trent Elders and Traditional Knowledge Keepers Council;
 - » Updates to baseline ITK data, as needed, to keep information current (to be determined by Trent University and advised by the Trent Elders and Traditional Knowledge Keepers Council); and
 - » The preparation of an ITK action plan that identifies actions that may benefit the land, water, flora, and fauna.

Nature-inclusive design components may include green roofs, green walls, pollinator gardens, vegetable gardens, pocket forests, medicine gardens, bird feeders/houses, etc.

18.3 Developing Nature Area Management Plans

The Trent Nature Areas are a vital part of the University's commitment to preserving and honouring the natural world and represent a major component of the UGN. The Nature Areas Stewardship Plan (Part III of the TLNAP) provides guidance for the stewardship of the 11 Nature Areas by presenting an updated vision, goals and management categories.

Implementation of the Nature Areas Stewardship Plan will be achieved through Nature Area Management Plans, prepared for each Nature Area. A Nature Area Management Plan may include multiple Nature Areas where there is a function (e.g., ecological) connection and management would be best achieved by considering them together. To support preparation of these plans, a preliminary Terms of Reference is provided in Appendix B.

Where possible, the Nature Area Management Plans will be informed by the System-Level Plan. These plans represent the primary implementation tool for management/stewardship of the Nature Areas. The Nature Area Management Plan will provide direction on how the Nature Area will protect and/or conserve important natural heritage and cultural features, support research and education opportunities, and sustain recreation through the application of the framework described in the Nature Areas Stewardship Plan (Part III of the TLNAP).

The Nature Area Management Plans will integrate Indigenous Traditional Knowledge (ITK), combined with western science, to develop a holistic view of the natural system and its functions. The Nature Area Management Plan should integrate:

- » The preparation of site-specific ITK studies that assess the impacts of the management plan on the ITK values and cultural assets of a Nature Area;
- » Updates to baseline ITK data, as needed to keep information current (to be determined by Trent University and advised by the Trent Elders and Traditional Knowledge Keepers Council);
- » The preparation of an ITK action plan that identifies actions that may benefit the land, water, flora, and fauna.

18.4 Guidance for Modifying the Trent Nature Area Boundaries

The intent and direction given through the Trent Lands and Nature Areas Plan is to preserve the Nature Areas as a significant part of the Symons campus, and to protect the important natural heritage features within them. The extensive engagement and study conducted as part of the TLNAP was designed to consider a large body of available information to update the Nature Area boundaries.

As a management tool, the boundaries of the Nature Areas may continue to be refined over time to reflect site-specific studies and opportunities that support the goals of the Nature Areas. Where boundaries are not determined by roadways, feature limits (e.g., woodland, wetland) often form logical opportunities for delineation of boundaries. These boundaries are depicted as approximate in the Nature Areas Stewardship Plan and will be staked and confirmed upon completion of environmental studies and evaluation of feature significance, usually in conjunction with a site-specific study process associated with Nature Area Management Plans and/or land use planning for adjacent lands. During these studies, there may be situations where the boundaries are increased to reflect or capture:

- » A confirmed significant feature in accordance with policy or legislation. For example: Ministry of Environment, Conservation, and Parks confirmed habitat for Species at Risk protected under the Endangered Species Act that is contiguous to a current Nature Area.
- » Unique or exemplar landforms that are not represented within the Nature Areas at the time of proposal and warrant extension of an existing Nature Area to include.

- » Planned opportunities to create habitat through restoration and enhancement areas approved and completed by the University that occur adjacent to and were implemented with the purpose of extending an existing Nature Area.
- » Cultural areas of importance to the University or the Michi Saagiig that are considered compatible with and would be well served through inclusion within the Nature Area(s) to ensure their long-term protection.

It is important to note that features, areas, and functions do and will continue to exist within and outside of the Nature Areas. All features, areas, and function will be treated in accordance with applicable legislation, policy and regulation to ensure good land planning and stewardship practices. The list above provides general guidance, but is not exhaustive and cannot presume all potential conditions that may occur.

Boundary changes that reduce the Nature Areas on the Symons campus are to be avoided, and should only be considered by the Board of Governors where it is demonstrated that such changes are unavoidable or avoidance is not feasible (e.g., as determined through an Environmental Assessment, or due to roadway safety). Where encroachments occur, they must be accompanied by a mitigation and compensation plan.

Roles and Responsibilities

A number of administrative bodies will be involved to varying degrees in the review and approval of any boundary modifications to the Trent Nature Areas, including the:

Board of Governors: Trent's Board of Governors is the approval authority that will make the ultimate decisions with respect to changes to the Nature Area boundaries.

Finance and Property Committee: It is the responsibility of the Finance and Property Committee to review and recommend changes to the Board of Governors for approval.

Nature Areas Stewardship Advisory Committee: As an advisory committee with members knowledgeable in ecology and natural heritage, the Nature Areas Stewardship Advisory Committee serves as an important resource to Senior Administration for reviewing proposed changes to boundaries of the Nature Areas. Where relevant, proposals for boundary revisions are to be brought to the committee for input and advice.

