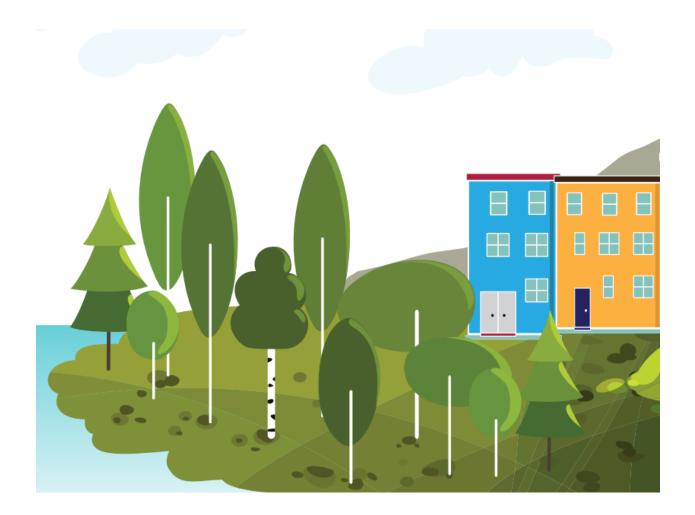
# City of St. John's Landscape Development Policy





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# Introduction

Through the implementation of long-term planning documents such as St. John's Urban Forest Management Master Plan and <u>Parks and Open Space Master Plan</u>, the City is committed to cultivating an urban forest that is diverse, attractive, and sustainable which builds upon the City's existing network of parks, green spaces, trails, and tree-lined streets.

St. John's has forests and natural areas which extend deep into the city. These forested areas are beautiful. They provide places for recreation and rest from the pressures of urban living. They also contribute to how we manage stormwater runoff. Development enables cities to meet the needs of a growing population. With St. John's unique growing conditions, slow-growing environment and limited growing season, the focus must be on preserving our existing resources.

The City requires that all landscaping within City Parks, municipal lands, or as part of the development process be completed in accordance with the following policy. These requirements are applicable to all levels of development proposed within the City of St. John's regardless of size, cost, or level of complexity.

This policy has been prepared to provide developers and contractors with the necessary information including construction details in order to avoid delays and facilitate the approval process, while at the same time, ensuring the long-term sustainability of the City's Green Infrastructure.



# Section 1 Landscape Standards

# 1.1 Residential Development

#### **General Landscape Requirements:**

- 1. The existing landscape character shall be preserved, to an extent reasonable and feasible. This includes the preservation of existing trees and the incorporation of new trees into the landscape.
- 2. A minimum of 30% of the front yard shall be covered with soft landscaping, or as specified by zoning regulations. Landscaping shall be continuous on the lot.
- 3. The front, side, and rear yards of a residential lot shall be covered with landscaping.
- 4. Apartment buildings shall be landscaped in accordance with the Commercial Development Policy.
- 5. Street trees (minimum one per lot) shall be situated within a front or side yard, visible from the road, and subject to requirements of <u>Envision Development Regulations</u>.
- 6. No tree shall be planted closer than 1.5 m from any driveway, or laneway, nor shall a tree be planted in such a manner that its eventual growth cannot be maintained.
- 7. In instances where a piece of land is being subdivided and prepared for sale as individual residential development lots, developers are required to ensure future development can comply with these requirements.
- 8. Where a lot or development is proposed, a landscape and snow storage plan is required subject to the requirements of .
- 9. Shrubs, ground cover and other plant materials shall be used to compliment tree planting but shall not be the sole contributor to the landscape. Effective use of earth berms, existing topography and existing vegetation is also encouraged as a component of the overall landscape plan.



# 1.2 Non-Residential Development

#### **General Landscaping Requirements:**

- 1. The existing landscape character shall be preserved to an extent reasonable and feasible. This includes the preservation of existing trees and incorporation of new trees into the landscape.
- 2. A minimum of 20% of the development shall be covered with soft landscaping, or as specified by zoning regulations.
- 3. In addition to zone requirements, apartment buildings shall be landscaped in accordance with the Commercial Development Policy.
- 4. All landscaping adjacent to paved areas shall be protected by concrete curbs, retaining structures or other protective measures.
- 5. Buffering and screening shall be installed where an industrial, commercial, institutional, agricultural, or public use abuts an existing or proposed residential use, as outlined in <u>buffering and screening</u>.
- 6. Landscaping, both at the time of establishment and in future, shall not obstruct vehicular sightlines at street intersections, access drives, parking aisles, etc., nor shall any feature which creates an obstruction of view be located within the sight triangle.
- 7. Trees shall be placed along property frontages, subject to the line-of-sight requirements of the <u>St. John's Development Regulations</u>. Trees planted along street frontages shall be situated a maximum of 8 m on centre, at a minimum frequency of one tree per 8 m of frontage. Wider spacing may be accommodated at specific locations to enable the safe use of a street/sidewalk, to accommodate snow clearing, or to facilitate other intended site usages. Tree planting density; however, may not be reduced.
- 8. Implementing and maintaining landscaping in accordance with approved landscape plans is a requirement of the City's <u>Commercial Maintenance By-law, City of St. John's By-law No. 618.</u> Where properties do not conform, the City may complete the required work to achieve compliance and levy the cost of completing the work against the property owner as taxes due and owing in respect to the property.
- 9. No tree shall be planted closer than 1.5 m from any driveway, or laneway, nor shall a tree be planted in such a manner that it's eventual growth cannot be maintained, so as to avert interference with, or obstruction to, any improvements installed for public benefit.



# 1.3 Landscape Plans

Landscape plans and associated details are a required component of development applications. These plans must be prepared by a qualified landscape professional with the required skills to interpret construction plans and develop landscape designs that are harmonious to the City's values and with other elements of the proposed development.

Landscape plans should be developed in concert with the overall site development process and follow Canadian landscape standards. Engaging the services of a landscape professional early in the project planning stages can help to ensure alignment with City requirements, avoiding costly delays and revisions at later stages.

#### General requirements:

Landscape plans must include the following:

- a) Total calculation of landscaped areas.
- b) Existing vegetation to be removed.
- c) Existing trees to be retained, including a tree protection plan when required.
- d) Proposed location of trees, flower beds, and planters.
- e) Proposed location of driveways.
- f) Description and locations of hard landscaping.
- g) Identify areas to be sodded or seeded.
- h) Tree and shrub planting details, including soil specifications.
- i) Snow storage plan.

Trees and shrubs shall be selected in accordance with the <u>Tree Planting Specifications</u> or those species that are hardy to Canadian Plant Hardiness Zone 5B, salt tolerant, adapted to environmental conditions at the site, with a proven local history. Trees and shrubs shall meet the most recent version of the Canada Nursery Stock Standards.

All landscaping adjacent to paved areas shall be protected by concrete curbs, retaining structures or other protective measures.

Shrubs, ground cover and other plant materials shall be used to compliment tree planting but shall not be the sole contributor to the landscape. Effective use of earth berms, existing topography and existing vegetation is also encouraged as a component of the overall landscape plan.

Landscaping, both at the time of establishment and in future, shall not obstruct vehicular sightlines at street intersections, access drives, parking aisles, etc., nor shall any feature which creates an obstruction of view be located within the site triangle.



Refer to the <u>City of St. John's, Department of Engineering, Specifications Book</u> for applicable standards of individual features, e.g., tree planting, sodding, etc.

In determining the suitability of the proposed landscaping, the Department of Public Works, Parks and Open Spaces Division will consider topographical constraints on design, drainage, access, egress, utilities and other factors reasonably related to the health, safety and welfare of the public which necessitated disturbance of the existing natural landscape character.

# 1.4 Land for Public Purposes

<u>St. John's Parks and Open Space Master Plan</u> describes the vision for the City's Parks and Open Spaces network and provides a series of requirements for development to ensure this vision is achieved. Applicants must review the requirements to ensure compliance.

Applicants are responsible for identifying existing and proposed green spaces, trails, parks, and their proximity to the proposed development. Green spaces, trails, and parks must be categorized using the classification system included in the City's Parks and Open Spaces Master Plan.

For a development that is not a subdivision, Council may require the owner of the lands forming the development to convey to the City a portion of the land being developed for public purposes as per section 4.7 of the City's <u>Development Regulations</u>.



# 1.4.1 Green Space Classification

Green Spaces have high environmental value within the City and have two classifications.

#### Greenway

• Greenways provide open space connections to and from parks, schools, and neighbourhoods, and may include wildlife corridors, pathways, and trails. Thus, the greenway is a vegetated corridor of land that incorporates pathways or trails.

#### Natural Space

• These are areas of land, or water, representing distinct elements of an area's geological, ecological, or species diversity, and includes natural landscapes or features of value for natural heritage protection. Although human participation is encouraged in natural spaces, the participation is secondary to space protection.

Further information and design guidelines can be found in <u>Parks and Open Space Master Plan</u>.

### 1.4.2 Park Classification

Parks are public land specifically designed or reserved for the general public for active or passive recreational use. They include all natural and man-made landscaping, facilities, playing fields, buildings, and other structures that are consistent with the general purpose of public park land. There are six different park classifications.

#### **Neighbourhood Park**

- Local park, providing easy access to recreation and leisure activities. May include informal court and field play spaces, playground equipment, natural space and access to trails.
- Approximately 1 hectare in size, placed at 20-minute walking intervals (1600 m)

#### **Community Park**

- Strategically placed parks designed to meet the needs of several adjacent neighbourhoods. This type of park may include formal sport facilities, expanded play areas and are suitable for hosting community events.
- Between 3.2 and 12.1 hectares in size, placed at 40-minute walking intervals (3700 m no more than 20 minutes from any resident's front door).



#### **Municipal Park**

- This is a large, destination park, suitable for a variety of different uses, including festivals and sport tournaments. These sites may include a number of unique features such as: BMX tracks, ice skating trails or rinks, picnic areas, internal walking trails, off-leash dog areas, etc.
- Between 12.1 to 40 ha and above in size, attracting visitors from within a 50 km radius of the site.

#### Urban Plaza

- Social gathering sites, typical of downtown or large commercial sites, providing opportunities for social interaction, public markets and small events.
- Location, size and use may vary.

#### **Neighbourhood Square**

- Social focal point for high-density residential or institutional areas. Providing opportunities for rest, recreation or public events.
- Location, size and use may vary.

#### **Community Common**

• This classification refers primarily to existing tot-lots. Where feasible to do so, the City will work with local residents to ensure these sites meet the current needs of the surrounding community.

Further information and design guidelines can be found in <u>Parks and Open Space Master Plan</u>.



# 1.4.3 Trail Classification

Trail networks are designed and constructed throughout the City to provide connectivity through varied contexts. There are two classification of trails within the City.

**Community Trail** – connects neighbourhoods and provides access to frequent destinations within the community. These trails may be single-use or multi-modal depending upon the needs of the community. These trails are essential as they often provide connection to the larger, municipal trail network.

**Municipal Trail** – larger, multi-modal trail network that exists throughout the City, providing access to key destinations and support alternative means of transportation.

Further information and design guidelines can be found in <u>Parks and Open Space Master Plan</u>.

Applicants must review these requirements and classification descriptions in the context of any proposed development to ensure compliance.

Where existing Public Open Space and recreation infrastructure exists, the City may accept from the applicant, payment of a sum of money equivalent to 10% of the raw land value of the Subdivision or a combination of money and land equivalent to 10% of the raw land value of the Subdivision.

Section 5.4 conveyance of land for public purposes of Envision Development Regulations

# 1.5 Buffering & Screening

- Where an Industrial, Commercial, Institutional, Agricultural, or Public Use abuts an existing or proposed Residential Use, a 6 metre Buffer together with a Screen, not less than 1.8 metres in height, shall be erected by the developer or owner of the Industrial, Commercial, Institutional, Agricultural, or Public Use on their Lot.
- 2. Notwithstanding Subsection (1), where a Commercial Local Zone Use abuts an existing or proposed Residential Use, a 3 metre Buffer together with a Screen, not less than 1.8 metres in height, shall be erected by the developer or owner of the Commercial Local Use on their Lot.
- 3. Notwithstanding Subsection (1), where a Commercial Local-Downtown Zone Use abuts an existing or proposed Residential Use, Buffering and Screening shall be in the discretion of Council.



# **1.6 Tree Planting Standards**

The following standards apply to the installation of trees pursuant to a development agreement: tree maintenance permit, building permit, or other related condition as imposed by the City of St. John's.

# 1.6.1 Location & Spacing

#### Residential

Street trees (minimum one per lot) shall be situated within a front or side yard visible from the road, subject to line-of-sight requirements of <u>Envision Development Regulations</u>.

#### **Non-Residential**

Trees shall be placed along property frontages subject to the line-of-sight requirements of the <u>St. John's Development Regulations</u>. Trees planted along street frontages shall be situated a maximum of 8 m on centre, at a minimum frequency of one tree per 8 m of lot frontage. Wider spacing may be accommodated at specific locations to enable the safe use of a street, sidewalk, to accommodate snow clearing, or to facilitate other intended site usages. Tree planting density; however, may not be reduced.

No tree shall be planted closer than 1.5 m from any driveway, or laneway, nor shall a tree be planted in such a manner that its eventual growth cannot be maintained, so as to avert interference with, or obstruction to, any improvements installed for public benefit.

### 1.6.2 Tree Support

Trees are to be supported during the first two years following planting via stakes installed at the edge of the root ball. Stakes are to be inserted a minimum of 600 mm into the ground facing the prevailing wind. Trees are to be attached with gauge twelve galvanized wire or approved equivalent tree ties. Wire to be encased in rubber hose where wire may contact the tree. Coniferous trees are to be wrapped in burlap during the first two winter seasons following planting.

### 1.6.3 Soil Composition

Trees shall be planted in good quality soil consisting of 50% loam, 30% decomposed organic matter and 20% sand.

Cultivated soil to provide for a minimum porous root zone of 1.8 m<sup>3</sup> (1.5 m - width, 1.5 m – length and 0.80 m - depth) to enable normal root development and tree establishment. In the instance that these specifications conflict with the City's Tree Planting Detail, the Tree Planting Detail shall prevail.



### 1.6.4 Species Diversity

In line with the City's goal to improve the health and resiliency of St. John's natural environment, species diversity is encouraged. No single tree species shall represent more than 25% of the total number of trees proposed within a development. Exclusions may be considered to accommodate specific landscape designs e.g., reforestation plantings, historical features, subject to the approval from the Municipal Arborist.

### 1.6.5 Species Selection

When selecting tree species, consideration must be given to tree size at point of maturity, fruit and nut debris, above and below ground utilities/infrastructure, adjacent structures, driveways and root growth requirements.

Trees and shrubs shall be species hardy to Canadian Plant Hardiness Zone 5B, salt tolerant, adapted to environmental conditions at the site, with a proven local history. Species selection is subject to the approval of the Municipal Arborist.

#### 1.6.6 Stock Type and Size

Planted trees shall be nursery grown balled and burlapped, container/potted, or wire basket stock. Planted trees shall be of the following minimum size:

#### Residential

- Deciduous 40 mm caliper
- Coniferous 100 cm high

#### **Non-Residential**

- Deciduous 50 mm caliper
- Coniferous 150 cm high

#### 1.6.7 Relocation of Trees

Where feasible, retention of existing vegetation is encouraged. In some instances, this may include moving existing trees or shrubs, either as means to accommodate a proposed design element, or to preserve a unique or desired specimen. A qualified arborist should be engaged prior to transplanting trees.



### 1.6.8 Establishment

Tree planting and other landscaping shall be completed prior to the issuance of a final occupancy permit. In instances where this is not possible, temporary approval may be granted subject to the property owner agreeing to complete the approved work per the following schedule:

Outstanding work identified by September 30<sup>th</sup> must be completed within 60 days, whereas, outstanding work noted after September 30<sup>th</sup>, must be completed by June 30<sup>th</sup> of the following year.

Upon completion of the landscaping, and prior to requesting a landscape inspection, a digital as-planted landscaping plan shall be submitted to the city. Plant material will be inspected no sooner than 60 days after the submission of the as-planted plans are received. Plant material placed in the Fall will not be accepted until the following June when it can be determined whether or not the vegetation has established and will survive.

In accordance with the City of St. John's <u>Commercial Maintenance By-law, By-law No. 618</u>, property owners are responsible for maintaining all landscaping in accordance with approved plans in perpetuity. Where properties do not conform with the by-law, the City may complete the required work to achieve compliance and levy the cost of completing the work against the property owner as taxes due and owing in respect to the property. Therefore, it is essential to ensure that the proposed landscaping is well suited for the intended site.

### 1.6.9 Tree Planting Detail

The City of St. John's sample tree planting detail has been developed to provide consistent direction with respect to tree planting. The sample detail is applicable to both coniferous and deciduous trees of varying root stock conditions and can be found in the <u>Tree Planting Detail</u>



# **1.7 Tree Protection Standards**

The existing landscape character shall be preserved to an extent reasonable and feasible. This includes the preservation of existing trees. Where proposed work, including demolition, has the potential to cause damage to existing trees, they must be protected during all stages of construction. In most instances, this can be achieved with tree protection.

# 1.7.1 Tree Protection Requirements

When the proposed work can cause damage to existing trees above or below ground, tree protection is required. Existing trees are to be protected and must be identified on all plans, including the landscape plans. Tree protection is applicable to all levels of development proposed within the city of St. John's, regardless of size, cost, or level of complexity.

Anyone failing to adhere to the tree protection standards for trees on public land will be financially responsible for resulting damages. Trees on public property are protected under the <u>St. John's Act</u> and can not be removed or damaged without prior authorization from the Department of Public Works, Parks & Open Spaces Division.

# 1.7.2 Establishing a TPZ (Tree Protection Zone)

The size and location of the required TPZ is as follows:

- a) A TPZ will be established around each tree within and immediately adjacent to any proposed developments.
- b) The TPZ will be determined based upon the DBH (Diameter measured at Breast Height) of the tree in question, multiplied by a factor of six (6). For example, a tree measuring 40 cm in diameter would require a tree protection zone of 2.4 m measured from the base of the tree (40 cm x 6 = 240 cm or 2.4 m).
- c) The minimum TPZ is 2.4 m.
- d) In an area with rows or groupings of trees, a continuous TPZ is preferred rather than individual TPZ's
- e) Final approval of the TPZ must be obtained by Department of Public Works, Parks & Open Spaces Division prior to the start of construction.



# 1.7.3 Prohibited Activities Within a TPZ

Once a TPZ has been established, the following activities are prohibited within the TPZ:

- excavation
- storage of material, refuse or other debris
- changes of grade
- cutting of tree limbs or roots
- dumping of slurries or other liquids
- operation of heavy equipment
- entry of vehicular traffic, etc.

Where excavation is in close proximity to existing trees, hand digging, hydro excavation, or other approved non-invasive methods of excavation may be required in conjunction with root pruning. In these instances, individual tree assessments will be required. Individual tree assessments may also be required where minimum TPZ's cannot be achieved. The individual tree assessment should determine the tree's ability to withstand the proposed work while maintaining the structural stability of the tree.

In addition to establishing TPZ's it may be necessary to implement other protective measures to protect the tree, such as installing a temporary layer of protective mulch to the root zone, pruning/removal of deadwood or limbs that may impact proposed activities, and post construction soil aeration. These measures and activities should be identified on the tree protection plans.

# 1.7.4 Tree Protection fencing

Once a TPZ has been established, it must be identified by protective fencing and signage. TPZ's can be defined using 1.2m orange plastic fencing attached to a 38 x 89 mm (2"x4") frame, details can be found in the <u>Sample Tree Protection Detail</u>. Where excavation is in close proximity to existing trees, tree protection hoarding is to be used. Tree hoarding is to be constructed of plywood or other rigid material where necessary to block debris from entering the TPZ. Protective fencing must remain in place through all stages of construction.

#### 1.7.5 TPZ sign

Signage shall be attached to the fencing identifying the area as a tree protection zone. A sample City of St. John's Tree Protection Zone sign can be found <u>Tree Protection Sign</u>. This sign is also available for download on the City's website.



# 1.7.6 Tree Protection Plan

Tree Protection Plans show details of tree protection, prepared in conjunction with an arborist or qualified professional.

All Tree Protection Plans must be legible, prepared at a usable metric scale and include the following information:

- Show all existing buildings, structures, hard surfaces and all existing trees within the area of consideration. Depending on the extent of site disturbance, trees on neighbouring properties may need to be included. (Area of disturbance must include all areas that will be disturbed by the proposed work, including the areas required for overdig, stockpiling, construction traffic, vehicular access and construction staging).
- The extent of the crown (drip line) or the extent of minimum tree protection zone TPZ (whichever is greater) of each existing tree.
- Proposed changes on site, including all proposed structures, services, hard surfaces, and grade changes.
- Indicate vehicular access and construction staging areas. Areas proposed for temporary stockpiling of fill or excavated material shall be fenced with sediment control to prevent sediment runoff.
- Indicate location of any excavation that requires root pruning.
- Indicate trees proposed to be removed and/or injured.
- Highlight and label tree protection barriers and the proposed tree protection zones.
- Include a comprehensive legend.

# 1.7.7 Tree Protection Plan Notes

The following notes should be included on tree protection plans submitted for construction related applications:

#### **General Notes:**

- It is the applicant's responsibility to discuss potential impacts to trees located near or wholly on adjacent properties or on shared boundary lines with their neighbours. Should such trees be injured to the point of instability or death, the applicant may be held responsible through civil action.
- Tree protection barriers shall be installed to standards as detailed in this document and to the satisfaction of Parks and Open Spaces Division.
- Tree Protection Signage must be attached to all sides of the barrier.
- Prior to the commencement of any site activity such as site alteration, demolition or construction, the tree protection measures specified on this plan must be installed to the satisfaction of Parks and Open Spaces Division.



- Once all tree/site protection measures have been installed, Parks and Open Spaces
  Division must be contacted to arrange for an inspection of the site and approval of the
  tree/site protection requirements. Photographs that clearly show the installed tree/site
  protection shall be provided for review.
- Tree protection barriers must remain in place and in good condition during demolition, construction and/or site disturbance, including landscaping, and must not be altered, moved or removed until work is completed.
- No construction activities, including grade changes, surface treatments or excavation of any kind are permitted within the area identified on the Tree Protection Plan or Site Plan as a minimum Tree Protection Zone (TPZ). No root cutting is permitted. No storage of materials or fill is permitted within the TPZ. No movement or storage of vehicles or equipment is permitted within the TPZ. The area(s) identified as a TPZ must be protected and remain undisturbed at all times.
- If the minimum tree protection zone (TPZ) must be reduced to facilitate construction, the tree protection barriers must be maintained at a lesser distance and the exposed portion of TPZ must be protected using a horizontal root protection method approved by Parks and Open Spaces Division.
- Any roots or branches indicated on this plan which require pruning, must be conducted in accordance with good arboricultural practices.

### 1.7.8 Tree Pruning

Tree branch and root pruning of trees that are to be preserved is to be identified on the Tree Protection Plan. Pruning is to be completed following in accordance with <u>1.8 Tree Pruning</u> <u>Standards</u>

### 1.7.9 Removal of Trees on Public Land

Trees on public property are protected under the <u>St. John's Act</u> and can not be removed or damaged without prior authorization from the Department of Public Works, Parks and Open Spaces Division. Where public trees are being removed to facilitate development, or the installation, or upgrading of infrastructure associated with development requirements, the developer is financially responsible for providing payment equal to the replacement value of the tree.

# 1.8 Tree Pruning

Proper pruning is essential in developing a tree that has a strong structure and desirable form. Trees that receive the appropriate pruning measures will require less corrective pruning later on. Other reasons for pruning may include but are not limited to, reducing risk, maintaining, or improving tree health and structure, improving aesthetics, or for other specific needs.



# 1.8.1 Competencies

Tree maintenance shall be performed by an arborist or arborist trainee who, through related training, on-the-job experience, or both, are familiar with the proper practices and hazards of arboriculture work and are familiar with the use of equipment used in such operations. This standard shall not take precedent over arboriculture safe work practices. Tree maintenance operations shall comply with all Occupational Health and Safety Regulations.

### 1.8.2 Pruning Cuts

- All pruning tools used to make cuts shall be sharp. Equipment and work practices that damage living tissue and bark beyond the scope of work are to be avoided.
- A pruning cut that removes a branch at its point of origin shall be made close to the trunk or parent limb, without cutting into the branch bark ridge, or collar, or leaving a stub.
- A pruning cut that reduces the length of a branch or parent stem should bisect the angle between its branch bark ridge and an imaginary line perpendicular to the branch or stem.
- The final cut shall result in a flat surface with adjacent bark firmly attached. When removing a dead branch, the final cut shall be made just outside the collar of living tissue.
- Severed limbs shall be removed from the crown upon completion of the pruning, or any time when the tree would be left unattended.

### 1.8.3 Root Pruning

Root pruning should be considered when other options for correcting a conflict between roots and infrastructure are not practical. Root pruning affects both the health and the stability of a tree. As a result, it is critical that root pruning is kept to a minimum.

Before root pruning, an arborist shall conduct and document an assessment of the amount of pruning required to correct the conflict, while accounting for the impact the root loss will have on the tree stability and overall health.

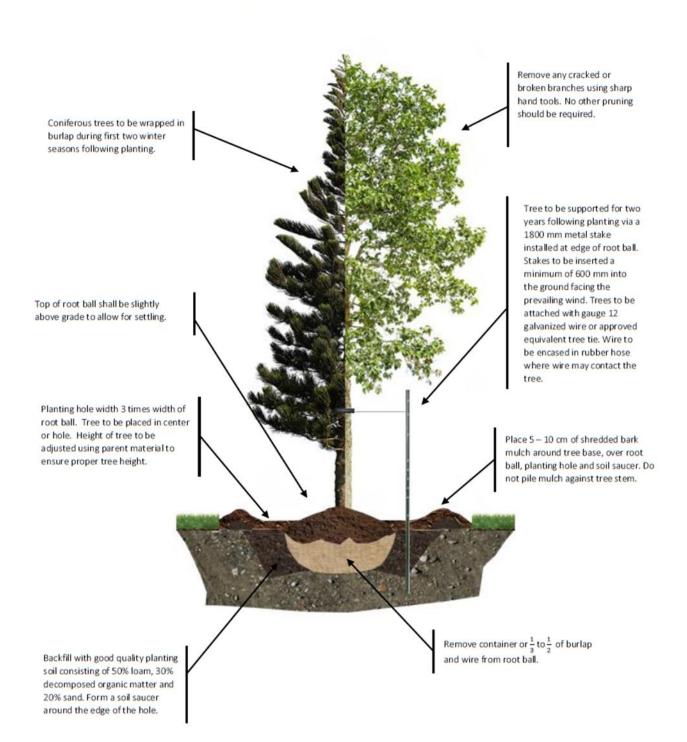
Roots measuring 3 cm or larger in diameter, must be pruned using sharp tools and following proper arboriculture practices. Ripping or tearing of roots and limbs create access points for pest and disease and promote decay therefore they must be avoided.



2.0 Sample Details

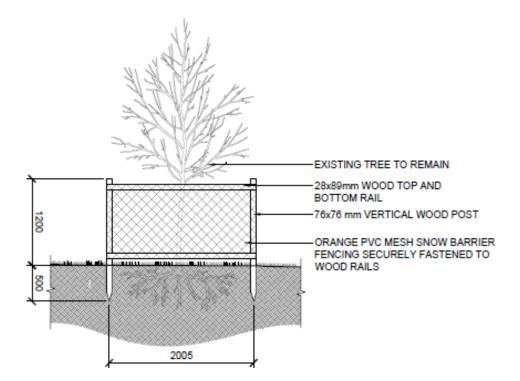


#### 2.1 Sample Tree Planting Detail

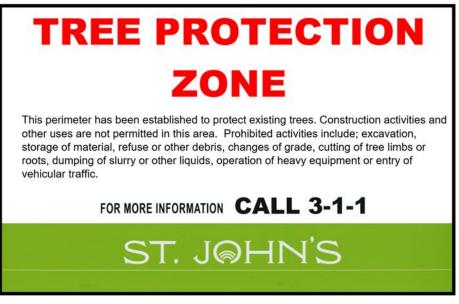




#### 2.2 Sample Tree Protection Detail

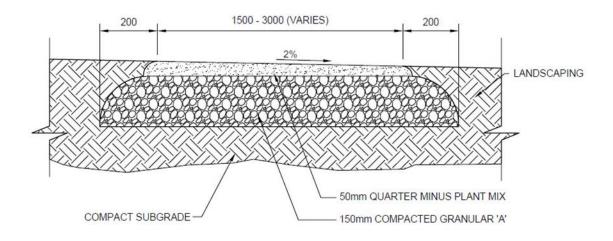


#### 2.3 Sample Tree Protection Sign





### 2.4 Sample Trail Detail



#### 2.5 Sample Trail Layout

