



Township of Malahide Tree Trimming, Removal & Replacement Policy

A. Authority

The authority for the Tree Trimming, Removal & Replacement Policy shall be by the approval of the Council for the Township of Malahide.

The inspection and removal of decayed, damaged or dangerous trees or branches of trees is authorized by the *Municipal Act, 2001 Section 62* and shall be at the discretion of the Director of Physical Services or his/her designate.

B. Policy Statement

Public safety and the protection of the environment are important to Council. For various reasons, it may be necessary to remove mature trees along road allowances that are adjacent to settlement areas and homes.

Replacement tree(s) will be offered to eligible private homeowners who have had trees removed by the Township. All replacement trees shall be limited to a quantitative ratio of one-for-one, and be placed at a mutually agreeable location on the property in question.

C. Definitions

“Council” – means the Council for the Corporation of the Township of Malahide.

“Director of Physical Services” – means the Director of Physical Services for the Corporation of the Township of Malahide or his/her designate.

“Road Allowance” – means a common and public road way, street, avenue, parkway, driveway, or any part thereof, including bridges, which is intended for or used by the general public for the passage of vehicles and/or pedestrians and includes the area between the lateral property lines thereof.

“Township” – means the Corporation of the Township of Malahide.

“Tree” – means a plant having a permanently woody main stem or trunk, ordinarily growing to a considerable height, and usually developing braches at some distance from the ground.

“Tree Stump” – means the lower end of a tree remaining in the ground after most of the stem or trunk has been cut off.

D. Purpose

The purpose of the Tree Trimming, Removal & Replacement Policy is to authorize the removal of trees along public road allowances for the purpose of road widening, maintenance and public safety or for other reasons as determined by the Director of Physical Services.

The Tree Trimming, Removal & Replacement Policy will also serve the purpose of re-planting trees on private property adjacent to the road allowances if original trees have been removed.

E. Scope

This policy applies to the removal of trees on public road allowances and the option to re-plant trees at the request of eligible property owners neighboring the road allowances.

F. Procedures for the Tree Trimming, Removal & Replacement Policy Authority

The authority for the inspection, removal and trimming of trees upon land along road allowances is authorized through the Municipal Act, 2001 Section 62:

Entry on land, tree trimming

62. (1) A municipality may, at any reasonable time, enter upon land lying along any of its highways,

- a. To inspect trees and conduct tests on trees; and*
- b. To remove decayed, damaged or dangerous trees or branches of trees if, in the opinion of the municipality, the trees or branches pose a danger to the health or safety of any person using the highway. 2001, c. 25, s. 62(1).*

Immediate Danger

62. (2) An employee or agent of the municipality may remove a decayed, damaged or dangerous tree or branch of a tree immediately and without notice to the owner of the land upon which the tree is located if, in the opinion of the employee or agent, the tree or branch poses an immediate danger to the health or safety of any person using the highway. 2001, c. 25, s. 62 (2); 2006, c. 32, Sched. A, s. 26.

Tree Trimming

Within the course of their work, staff may be required to trim trees along road allowances. Trees may be trimmed along the road allowance if:

1. The tree branches are obstructing the visibility of an intersection, or road sign;
2. The tree appears to have dead sections, however does not meet the requirements for removal;
3. The Tree branches shade a portion of the road causing ice to form on the road; and/or
4. Branches over hang sidewalks maintained by the municipality so to not interfere with pedestrian traffic or maintenance equipment.

Tree Removal

Within the course of their work, staff may be required to remove trees along road allowances for the purpose of road widening, maintenance, and/or public safety.

Tree removal will be authorized by the Director of Physical Services or his/her designate.

When staff are conducting tree removals, they will follow the Procedure for Tree Cutting (Appendix A: Health and Safety Policy #PS15 – November 10, 2015).

A property owner may request for a tree located on Township property to be removed. However, due to the restrictions of municipal resources, the Township may be unable to remove the tree in a timely fashion. The property owner may submit a request to the Township to remove the tree themselves. At the discretion of the Director of Physical Services, and upon the receipt of satisfactory information (such as receipt of proper insurance), the property owner may be authorized to remove the tree and tree stump on their own accord.

As a courtesy, the wood from the removed trees will be offered to those property owners adjacent to the tree removal. If the property owners would not like the wood, the Township will leave the wood stacked in a safe distance from the road way and properly mark the wood as available. The wood will be available for any resident to claim at their own risk for a minimum of 10 business days, after which time municipal staff will remove and dispose of the wood.

Tree Stump Removal

The Township may remove tree stumps if any portion of the stump is located on a municipal road allowance or right-of-way, if:

1. The tree was removed by the Township of Malahide, and
2. The stump is deemed by the Director of Physical Services to interfere with an adjacent sidewalk or municipal utility, and

3. In the case where a stump is located in part on private property, the adjacent property owner has signed a consent form authorizing the work.

The Township may remove tree stumps when the stump is located on the property line between a municipal road allowance or right-of-way, if:

1. The tree was removed by the Township of Malahide, and
2. The stump is deemed by the Director of Physical Services, to interfere with an adjacent sidewalk or utility, and
3. The adjacent property owner has signed a Consent Form authorizing the work and has paid to the Township an amount equal to the estimated cost of the work times the percentage of the stump located on the private property.

Site restoration shall be the responsibility of the landowner consenting to the removal of the stump.

In the event a landowner requests the Township complete the site restoration, the landowner shall borne all expenses and responsibility for the works completed.

Notification

Prior to the trimming and/or removal of tree(s), property owners who are adjacent to the tree maintenance areas may be notified in writing. The notices may include the approximate date of the tree removal, location and municipal contact information.

In all events of municipal tree removal, the Township will make every effort to mark the tree with fluorescent paint to identify the tree at least one (1) week prior to the start of the work.

If the tree(s) is to be removed, the notice will include the option for eligible property owners to request a replacement tree to be planted. Property owners will be asked to notify the Township within five (5) business days after removal of trees to request a tree replacement.

Tree Replacement

Replacement tree(s) will be offered to private homeowners in urban, urban rural areas, or residences within 60m of the closest house corner if trees on adjacent road allowances have been removed due to maintenance and construction and are considered significant with respect to streetscape, heritage or environment as determined by the Director of Physical Services.

Requested replacement tree(s) will be planted along the same side of the property as they were initially removed from. The type of tree and specific location will be determined by the Township after receipt of request. Due consideration will be given to ensure plantings will not interfere with snow removal, future traffic sightlines, below ground utilities or sidewalks.

Further tree planting conditions:

- All trees shall be planted 1.0-1.5m from the road allowance. New trees will not be permitted in the road allowance.
- All trees shall be placed a minimum of 10.0m apart.
- All trees shall be planted a minimum of 5.0m from Hydro Lines.

If the Director of Physical Services deems that sufficient room is not available for installation of a replacement tree between an existing structure and road allowance, a tree will not be offered. There will not be any other form of compensation offered.

Replacement trees shall be requested from the Township Office through the Tree Planting Program.

Recommended trees are as included within Appendix B: Recommended Trees.

Trees will be planted within the year of request and as weather permits.

The property owner will be responsible for maintenance and care of the new trees.

Plantings must be protected from wildlife at the expense of the property owner. The Township accepts no responsibility as a result of the natural environment, traffic accidents, or acts of vandalism.

The Township will not guarantee the new tree(s). However, a warranty may be provided by the supplier.

G. General

This Policy shall be administered by the Physical Services Department.

This Policy shall be referred to as the Tree Trimming, Removal & Replacement Policy.

This Policy shall come into force and effect on the day of passing – December 15, 2016

This Policy shall be reviewed as required.

Appendix A:

Procedure for Tree Cutting

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|---------------------|-------------------------------|
| Approved by: | Director of Physical Services |
| Date Approved: | November 10, 2015 |
| Date Last Reviewed: | March 28, 2013 |
| Date Last Revised: | November 10, 2015 |
| Procedure No.: | PS15 |

PURPOSE:

To provide details of a procedure by which consistent positive protection can be provided for Workers felling trees in the workplace.

ROLES & RESPONSIBILITIES:

- 1. This activity shall not be undertaken when working alone.**
- The Worker using the chainsaw will familiarize him/herself with the operation of the chainsaw by reading the applicable Instruction Manual.
- The Worker using the chainsaw will follow PS4 – Procedure for Chainsaw Use
- The Worker functioning as part of the felling team will familiarize him/herself with the proper techniques set out below.
- The Supervisor and department head are responsible for ensuring that Workers are trained and that the policy/procedure is adhered to.

PROCEDURE:

The use of any chainsaw may be hazardous. The saw chain has many sharp cutters. If the cutters contact your flesh, they will cut you, even if the chain is not moving. At full throttle, the chain speed can reach 45 mph. It is important that you fully understand and observe the safety precautions and procedures set out below.

You must complete the Malahide in house Professional Chainsaw Operator training and be signed off as competent by the Corporation's certified instructors. If you have not been signed off as competent you will not handle a chain saw.

You must be in good physical condition and mental health and not under the influence of any substance which might impair vision, dexterity or judgment. Do not operate a chainsaw when you are fatigued. Be alert – if you get tired while operating a chainsaw, take a break. Tiredness may result in loss of control. Working with any chainsaw can be strenuous. If you have any condition that might be aggravated by strenuous work, check with your doctor before operating a chainsaw.

Basic Tree Cutting

The majority of tree cutting that municipal staff are involved in is on the road allowance, therefore the following must always be in place:

- Appropriate traffic control plan for roadside work which includes 2 flagmen; and
- A signal will be given to all Workers in the vicinity prior to the chainsaw starting.

Basic Tree Felling (for trees 4-10 inches in diameter and leaning in the direction of fall)

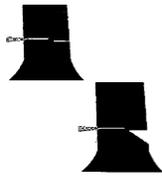


1. Access the felling area and clear it of hazards. Prepare at least one escape route back and away from the tree at a 45 degree angle. Select a target (stump, rick, tree, pe.g. etc.) in the desired direction of fall. Place the left hand on the corner of handle of the saw so that it hangs at a 45 degree angle. Place the left shoulder against the tree. Place the left knee behind the tree. With the body positioned behind the saw, aim the sight lines on the saw at a desired target. Bend down and at an appropriate height make a diagonal cut into the tree to a depth of between $\frac{1}{4}$ and $\frac{1}{3}$ of the tree's diameter.
2. Move to the front of the tree, bend down and using the first cut as a "window" into the tree, making a sloping cut upwards to meet the first cut to create a V notch. Ensure that both cuts meet cleanly (otherwise extend the cuts until they do). Place the saw against the back of the notch, stand behind it and use the sight lines to confirm that the notch is aligned with the target. If it is not, re-cut the notch until it is aligned.
3. With the top of the bar placed about one to two inches above the apex of the notch, make a back-cut by cutting towards the notch using the sight lines on the saw aimed at the target to ensure that the saw remains parallel with the notch. Stop cutting when approximately $\frac{1}{10}$ of the tree's diameter remains uncut. This uncut wood is called the "hinge" and is critical for controlling the direction of the fall of the tree. If the tree does not fall, a felling wedge may be required.
4. When the tree starts to fall, move away from it to a safe distance along the escape route (at 45 degrees). While making the escape, look over the shoulder to confirm the direction the tree is falling and determine if any limbs or debris are being thrown back towards the stump area. If possible, tuck in behind another tree for protection. Remain in the retreat position until all limbs and debris have fallen to the ground. Proceed to limb and top the tree only after all hazards have been recognized and addressed.

Felling a Tree Without a Lean in the Desired Direction of Fall (The "reverse technique" for trees 4-10 inches in diameter)

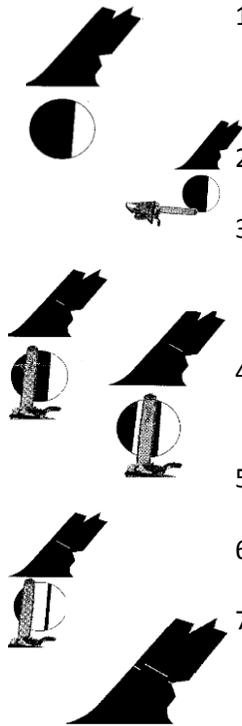


1. Assess the felling area and clear it of hazards. Prepare at least one escape route back and away from the tree at a 45 degree angle. Select a target (stump, rock, tree, peg, etc.) in the desired direction of fall.
2. With the sight lines on the saw aimed at the target, make a backcut to a depth of about 60% of the tree's diameter.



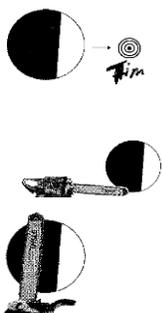
3. Insert a wedge into the backcut and tap it firmly into place without moving the tree forward.
4. Using the sight lines on the saw aimed at that target, make a horizontal cut in front of, and about an inch below the backcut. Leave about 1/10 of the tree's diameter uncut for a hinge.
5. Create a Humbolt notch by making a diagonal cut upwards to meet the horizontal cut while making sure not to cut the hinge. Drive the wedge until the tree starts to fall. Retreat from the falling tree to a safe distance along the escape route.

Felling Trees With a Lean in the Desired Direction of Fall (For trees at least 10 inches in diameter)



1. Using the sight lines on the saw aimed at a desired target, cut a notch between $\frac{1}{4}$ and $\frac{1}{3}$ of the tree's diameter. Ensure that both cuts of the notch meet cleanly. Then set the saw into the notch and using the sight lines ensure that the notch is aimed at the target. Correct if necessary.
2. Using the bottom of the bar placed about 1 inch above the apex of the notch, create a pocket in the side of the tree well back from the notch.
3. Swing the saw around and keeping the sight lines aligned with, or to the left of the target, shove the saw at full throttle and at right angles to the grain through the tree. Stop the saw, go behind the tree to the far side and determine where the saw came through the tree.
4. With the sight lines aimed at the target, carefully advance the saw towards the notch, being sure to leave about 1/10 of the tree's diameter uncut to create a hinge that is parallel with the notch.
5. Carefully cut towards the back of the tree and leave an uncut "tab" of wood between 1/10 and $\frac{1}{4}$ of the tree's diameter at the back of the tree.
6. Corner cuts can be made at the sides of the notch on trees that are sound and at least 12 inches in diameter.
7. Ensure that an escape route back and away at a 45 degree angle has been prepared and that nothing is in the danger zone. Drop the saw down an inch or two below the bore and cut the tab. When the tree starts to fall, move back from the tree along the escape route.

Felling Trees Without a Natural Lean in the Desired Direction of Fall (for trees at least 10 inches in diameter)



1. Using the sight lines on the saw aimed at a desired target, cut a notch between $\frac{1}{4}$ and $\frac{1}{3}$ of the tree's diameter. Ensure that both cuts of the notch meet cleanly. Then set the saw into the notch and using the sight lines ensure that the notch is aimed at the target. Correct if necessary.
2. Using the bottom of the bar placed about 1 inch above the apex of the notch, create a pocket in the side of the tree well back from the notch.



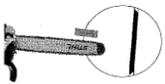
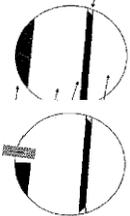
3. Swing the saw around and keeping the sight lines aligned with, or to the left of the target, shove the saw at full throttle through the tree. Stop the saw, go behind the tree to the far side and determine where the saw came through the tree.

4. With the sight lines aimed at the target, carefully advance the saw towards the notch, being sure to leave about 1/10 of the tree's diameter uncut to create a hinge that is parallel with the notch.

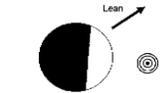
5. Carefully cut towards the back of the tree and leave an uncut "tab" of wood between 1/10 and 1/4 of the tree's diameter at the back of the tree. Corner cuts can be made at the sides of the notch on trees that are sound and at least 12 inches in diameter.

6. Swing the saw around and cut off half of the tab and insert a wedge.

7. Ensure that an escape route back and away at a 45 degree angle has been prepared and that nothing is in the danger zone. Cut the remaining half of the tab, tap in the wedge and move away from the tree along the escape route as it starts to fall.



Felling Trees With a Lean to One Side of the Desired Direction of Fall (for trees at least 10 inches in diameter)



1. Using the sight lines on the saw aimed at a desired target, cut a notch between 1/4 and 1/3 of the tree's diameter. Ensure that both cuts of the notch meet cleanly. Then set the saw into the notch and using the sight lines ensure that the notch is aimed at the target. Correct if necessary.



2. Using the bottom of the bar placed about 1 inch above the apex of the notch, create a pocket in the side of the tree well back from the notch.



3. Swing the saw around and keeping the sight lines aligned with, or to the saw, go behind the tree to the far side and determine where the saw came through the tree.



4. Carefully advance the saw at an angle towards the notch so that a pie shape hinge is left that is thin on the leaning side and thicker on the opposite side.

5. Carefully cut towards the back of the tree and leave an uncut "tab" of wood between 1/10 and 1/4 of the tree's diameter at the back of the tree.

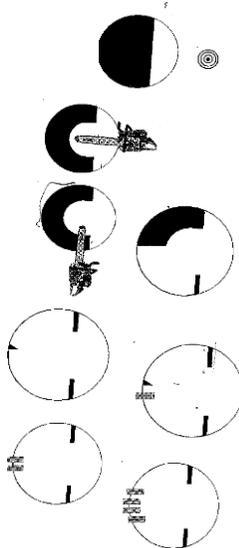
6. A corner cut can be made at the sides of the notch on the leaning side of the tree.

7. With the saw at the bore level, cut off half of the tab on the leaning side of the tree and tap in a wedge.

8. Ensure that an escape route back and away at a 45 degree angle has been prepared and that nothing is in the danger zone. Cut the remaining half of the tab, tap in the wedge and move away from the tree along the escape route as it starts to fall.



Felling Trees that are Greater than the Bar (for trees with a diameter great than the length of the bar)



1. Using the sight lines on the saw aimed at a desired target, cut a notch 1/3 of the tree's diameter. Ensure that both cuts of the notch meet cleanly. Then set the saw into the notch and using the sight lines ensure that the notch is aimed at the target. Correct if necessary.
2. Starting with the bottom of the bar, hollow out the centre of the tree leaving at least 4 inches of hinge wood on the sides
3. From the side, starting with the bottom of the bar, bore into the side of the tree and establish a hinge.
4. Cut towards the back of the tree and stop at the midpoint
5. Starting with the bottom of the bar, bore into the other side. Establish a hinge then cut to the back and leave a tab at the back of the tree.
6. Insert a wedge into the cut and tap it into place.
7. Cut off the tab and insert a second wedge
8. may require multiple wedges.

Felling Trees using Rope and Backhoe

1. An experienced chainsaw operator is to determine the tree to be cut and the natural lean. This competent person will determine if cutting in the direction of the natural lean is possible.
2. Once a tree is selected to be cut, in the direction of the natural lean determine which side of the tree the heavy branches are on.
3. Determine the location of hazards, ie, hydro or telephone lines, gas valves, private property fences or buildings etc.
4. Remove dead branches if possible
5. Tree to be felled is to be roped off to ensure control of the tree falling area:
 - a. Preferably place extension ladder against the tree on the side of the tree in the direction you wish the tree to fall (This may not be possible due to hazards or close quarters)
 - b. Ensure that the extension ladder is supported by another Worker at the base
 - c. Take the end of the rope up the ladder and secure the rope around the tree as high as possible (best leverage) and secure the clevis through the rope, tighten the rope and clevis around the tree so that it is secure.
 - d. Climb down from the tree and remove the ladder placing it back in the truck or out of drop zone.
6. Secure the other end of the rope to backhoe and move the backhoe to snug up the rope leaving the tension loose.
7. Ensure that the backhoe is 1.5 times the distance outside of the tree length.
8. Ensure that an escape route back and away at a 45 degree angle has been prepared and that nothing and no personnel are in the danger zone
9. Chainsaw operator to make appropriate notch in the direction of felling area.
10. Traffic is to be blocked from both directions by flagmen
11. Chainsaw operator to make his back cut and signal Backhoe operator. Once the tree begins to fall operator will travel the escape route away from the area
12. Backhoe operator, once signal is received from Chainsaw operator, will begin pulling in the direction the tree is to fall.
13. Tree will begin to fall with backhoe to continue to pull away from falling tree at the same speed.
14. Avoid jerking the rope.

15. Once the tree is down, drive ahead to slacken the rope so it can be removed from the tree.

PERSONAL PROTECTIVE EQUIPMENT:

1. Hard hat
2. Safety Glasses
3. CSA approved boots
4. Chainsaw gloves
5. Chainsaw pants or chaps
6. Hearing protection

REVIEW REQUIREMENTS:

Annual review of procedures.

COMMUNICATION

Post policy in staff accessible Health and Safety Binder

TRAINING REQUIREMENTS:

- Certification from Malahide in house instructors

Appendix B

Recommended Trees for Replacement

- American Beech
- American Chestnut
- American Elm
- Basswood
- Black Cherry
- Black Oak
- Black Walnut
- Blue Spruce
- Eastern Hemlock
- Eastern Red Cedar
- Eastern White Cedar
- Eastern White Pine
- Red Maple
- Red Oak
- Sugar Maple
- Tulip Tree
- White Birch
- White Oak