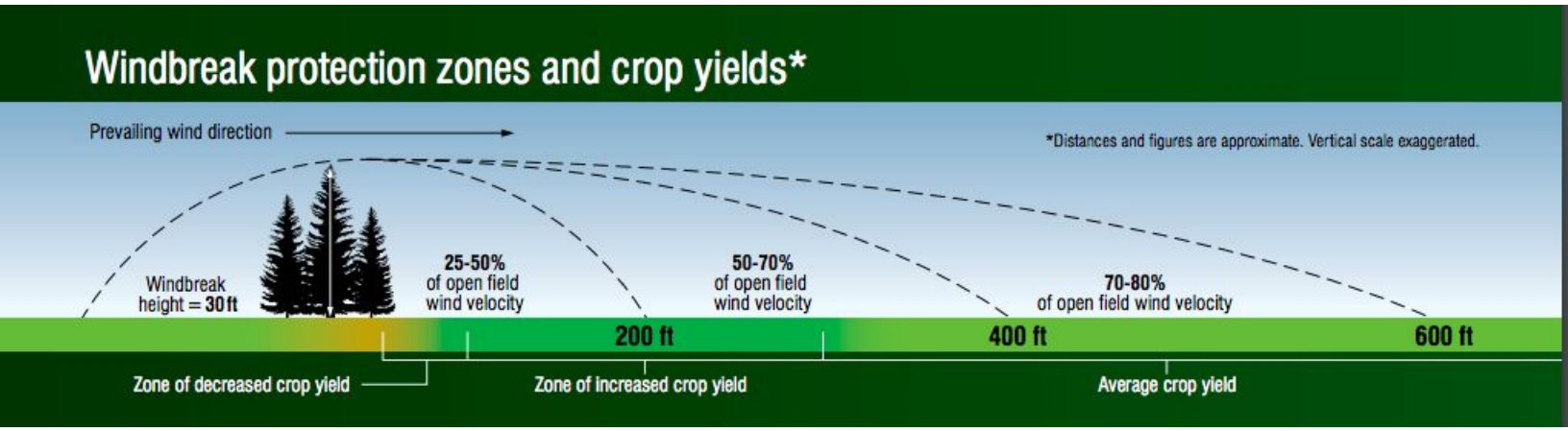
Township of Woolwich
Roadside Tree Planting Project

F.A.Q.'s

What are the advantages of our roadside tree project?

Q: Will roadside trees really provide a windbreak or snow fence for farm fields?

- Yes, according to Grand River Conservation Auhority forestry specialists: *"Strategically plant rows of trees adjacent to your farm fields to increase crop yields by slowing the wind and reducing moisture loss in plants and soil. You will also prevent erosion, increase pollinator habitat, provide wildlife corridors, increase snow deposition for added soil moisture, provide perching sites for raptors to decrease rodent populations and supplement farm income through forest products."*
  Read more at: https://www.wellington.ca/en/resident-services/resources/PDS_GRCA_Field_Windbreaks.pdf



- Yes, the Ontario Ministry of Agriculture, Food and Rural Affairs says: *"Windbreaks, shelterbelts and treed fencerows are vegetative barriers that reduce or eliminate the undesirable impacts of excessive wind."*
  Read more at: http://www.omafra.gov.on.ca/english/environment/bmp/AF167.pdf

- Yes, Top Crop Manager, the Canadian magazine of crop production and technology, says:
  "A 30 foot tall windbreak will provide a zone of protection 360 feet in one direction and 150 feet in the other."
  "You have to look at the big picture and the long term.There's no question the benefits far exceed the low cost of planting a windbreak and the small reduction in cropping space"
  Read more at: https://www.topcropmanager.com/establishing-a-windbreak-that-works-16903/

Q: Will maples actually create a windbreak? I thought that job was best suited to conifers.

- Yes, according to Sustainable Farming, "*Conifers tend to be too dense for field crop use... Deciduous trees are better suited for field crop protection."* Read more at: https://eap.mcgill.ca/MagRack/SF/Summer%2090%20M.htm

Trees for Woolwich

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F.A.Q.'s

What are the advantages of our roadside tree project?

Q: How much carbon dioxide do these trees absorb in a year? Does science support the benefits of roadside trees?

- Once the trees reach maturity, a single tree will absorb 48 lbs on average per year. The entire roadway planting project will absorb over 1,000,000 lbs per year! A car produces on average 10,000 lbs per year, which means the roadside planting project is the equivalent of taking up to 100 cars off of the road!
- As experts at carbon capture, trees are the antidote to many human activities that produce CO2, such as driving vehicles run on fossil fuels. As their canopies grow, so does their ability to capture carbon dioxide.
- Trees also absorb airborne pollutants such as ozone, carbon monoxide, nitrogen dioxide and sulfur dioxide and intercept micron level particulate matter such as smoke, dust and ash, as well as lowering temperatures.

Q: How many acres is the canopy of Woolwich's roadside trees, at maturity?

- 834 acres. Here is the math:

  Area = Average canopy width x roadway length that will be planted with trees
  Area = 15m x 225km / 1000m/km x 100 hectares/km2 x 2.47 acres/hectare
  Area = 834 acres

Q: How large is the roadside tree canopy compared to other green spaces in the Township?

- Very large. The roadside tree canopy would form the largest park in the Township. For comparison:

  - the combined area of the 4 largest parks in Elmira (Bolender, Gibson, Manor, and Lion's) is 62 acres, only 7% of the size of the Woolwich Roadside tree canopy.

  - Sandy Hills Regional Forest is less than 300 acres.

Q: How much does the roadside tree canopy increase tree cover on public land in the Township of Woolwich? Would it help Township achieve 30% tree cover?

- The project would increase tree cover on Township owned lands by 25%, from approximately 15% to over 40%. Yes, this action alone would achieve greater than 30% tree cover on township lands when trees reach maturity. There is no other land available to the Township that would have this impact on tree cover.

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What are the advantages of our roadside tree project?

Q: What will be the total value of the roadside trees at 40 years? Choose one:

a) $3M
b) $10M
c) $30M
d) None of the above

- The correct answer is d) None of the above. Using several different valuation methods for the variety of species planted, an average height of 45' and diameter at breast height (DBH) of 24", each tree would be worth $2400. Assuming a survival rate of 80%, the total value of Woolwich Roadside trees will be **$43,200,000**, compared to an establishment cost of just over $300,000.

Q: If you cut down all the mature trees in the Roadside at maturity (but please don't!), how long could you warm your house?

- A very long time. A typical hardwood tree 28" DBH and 60' high will yield 1.5 bush cords of firewood. A cord of firewood will heat an average house for 8 weeks. Assuming you are heating for 24 weeks / year, the Roadside trees would last approximately 11,000 years. So realistically, if you do cut down all the Roadside trees in about 70 years (please don't!!), you'll need a lot of friends to use up the firewood.

Q: Are there local examples of roadside plantings?

- Yes, go for a drive to check out:
- 119 trees planted on Lundy Road from 2006-2020
- 59 trees planted on Lerch Road in 2022
- 96 trees planted on Cedar Springs Rd. in 2008-2009
- 120 trees planted on Kramp Road in 2022
- 202 trees planted on Durant Road from 2012-2018
- 205 trees planted on Floradale Road in 2022

Q: Is anyone else doing this? Is this project in line with tree planting programs in other municipalities?

- In Clarington Township, The Trees for Rural Roads Program offers free trees to Clarington's rural residents to be planted along municipal roads on private land. Since 2012, nearly 8,000 native trees and shrubs have been distributed to rural property owners in Clarington for planting along rural roadsides.
  Note the difference: In Woolwich, we are planting, watering and pruning the trees rather than putting those responsibilities on landowners.

Trees for Woolwich

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F.A.Q.'s

What are the disadvantages?

Q: Will these roadside trees shade my crops?

- Yes, there will be some shading of your crops once the trees grow bigger in 15+ years.

Q: Will the branches interfere with my farm machinery?

- When properly pruned, a responsibility that will be taken on first by T4W and then by the township, tree branches should not interfere with your farm machinery. See adjacent photo of century-old maple trees along a farm field.

Q: Do roadside trees interfere with power lines?

- Yes, so we will only be planting small stature trees (<20 ft. mature height) under power lines.

Q: Is it true that roadside trees increase the risk of fatalities in motor vehicle accidents?

- The trees we are planting will be small enough that a vehicle leaving the road would easily damage the tree for the first few decades. By the time these trees are large enough to be of concern, experts predict we will have self-driving cars to avoid accidents.
- Studies show that vehicle speed is **reduced** on tree-lined roads. Traffic calming greatly reduces fatalities. In this study, a "5 mph increase in the maximum state speed limit was associated with an 8 percent increase in fatality rates." https://www.iihs.org/topics/bibliography/ref/2188

Q: Do roadside trees cause shading of asphalt and increase icy conditions?

- This is a concern, so we are prioritizing planting on gravel roads or on the East and North sides of roads.

Q: Will I be expected to volunteer my time to water, prune and maintain the trees near my property?

- No, Trees for Woolwich will water the trees for 2 years as needed and do the initial pruning, after which time the Township of Woolwich will take over responsibility for their care. All we ask is that you do not intentionally harm the trees with farm equipment or herbicides.

Q: I have been mowing the ditches. If I stop mowing around the new trees, won't the ditches look messy?

- We are learning to adjust our idea that beauty is a freshly mown lawn as we understand now that leaving grasses and wildflowers to grow in ditches creates much needed habitat for pollinators and birds.

Trees for Woolwich

Q: Is it a problem that I have been planting crops on township property?

- Yes, you will need to stop farming township land.