

# Berm Mowing and Tree Planting Service Levels

## ISSUE

This report provides background and budget information on two separate but similar inquiries related to mowing and tree planting on berms and rights-of-way.

## BACKGROUND

At its December 16, 2019 meeting, City Council resolved:

“That the Administration report back on providing a higher level of service for berm mowing on berm areas immediately adjacent to homes.”

In addition, at its June 29, 2020 meeting, City Council resolved:

“Could Administration please report back on the possibility of planting trees along the south side right-of-way next to Attridge Drive between Berini Drive and McOrmond Drive. Many arterial road locations next to residential buildings have planting and this area next to Attridge Drive does not.”

## CURRENT STATUS

### Berm Mowing

Within the currently approved service level and operating budget, berms are mowed and line trimmed three times per season. Service is conducted through a combination of Parks staff and contractor work. Contractors are used in areas of high slope grades and to minimize the need for additional equipment purchases. Contracted work for berms include those in Stonebridge, Evergreen, Claypool Drive in Hampton Village, Kensington, and Montgomery Place. For contracted berms, in 2020 there are 27.32 hectares of berm to mow, and 11.87 kilometers of line trimming. The timing of mowing activity depends on weather, moisture, and turf growth conditions. In the future, a minimum of 10 hectares will be added in Kensington.

### Contracted Berm Mowing

The contracted 2020 price for one full round of mowing and line trimming is \$11,577; the three mows in 2020 will total \$34,731. The average unit cost per hectare for mowing and line trimming combined is \$424. Depending on the berm, the mowing price per hectare varies from \$309 to \$618. Line trimming rates are a uniform \$0.20 per lineal meter, which is significantly below competitors and historical pricing levels for line trimming.

As a point of reference, in 2019, the cost for one full round of mowing and line trimming was \$17,577; the total contract price for three mows was \$52,732. The average unit cost per hectare for mowing and line trimming combined was \$509. Depending on the berm, mowing price per hectare varied from \$300 to \$700. Line trimming rates varied from \$0.55 to \$0.75 per lineal meter.

### Tree Planting Along Arterial Rights-of-Way

Many arterial rights-of-way next to residential areas include berms, which serve a mix of purposes, including aesthetics, separation, and sound attenuation. In general, berms are constructed of poor soil quality and not specifically designed for tree planting. This can make them difficult to access, limiting water availability for establishment, and there is potential utility conflicts limiting the number of potential plant sites being available.

The mortality rate of trees on berms has shown to be higher than trees planted elsewhere, as they are more susceptible to drought as a result of reduced water infiltration rates because of the slope and higher occurrence of sub-standard soil.

In general, tree planting along berms is conducted by developers in newer neighbourhoods. There is no dedicated funding source to support proactive maintenance services or the replacement of failed trees. Tree planting on these types of areas can also create difficult labour intensive conditions for establishment and maintenance due to the slope involved.

### South Side of Attridge Drive from Berini to McOrmond Drives

Trees on berms and in rights-of-way require special consideration before planting can occur. In this specific area, trees were not planted due to the reasons mentioned in the preceding paragraphs.

## **DISCUSSION/ANALYSIS**

### Costs for Additional Berm Mowing and Trimming

Prices fluctuate slightly from year to year; however, a conservative estimate for an additional contracted berm mow and trim in the contracted areas would be \$18,000. Mowing contracts could be adjusted to include an optional fourth mow per year. If a fourth mow is required annually, permanent budget allocation would be required. For logistical and consistency reasons, it is not recommended to mix or supplement contract mowing with in-house.

An additional contracted mow would help to control weeds prior to seed formation. Specifically, an option for one additional mow within the berm mowing contract, for wetter seasons would help control long grass, weeds, and seed formation. An additional mow, if required, could also allow the first cut to be earlier – currently the first cut is scheduled for July 1. By having this option, in a dry year, funds would be saved when an additional mow is not needed.

### Considerations for Additional Tree Planting on Berms

Currently, there is no service level or dedicated funding source that supports tree planting on berms in established areas. The approximate cost to plant a tree, including establishment watering, is \$700; however, it is important to note that the cost to establish trees on sloped areas, can be higher. Along the south side of Attridge Drive, from Berini Drive to McOrmond Drive is approximately 1,000m in length. If trees were to be planted according to the typical standard along rights of way (every 9m), approximately 100 trees could be planted at a minimum estimated cost of \$70,000.

In past practice, three years watering had been sufficient to establish a newly planted tree; however, in recent, drier years, trees have stayed on water routes for longer, sometimes five years before they are established and removed off of a watering route. During establishment, trees are watered every five to eight days. Depending on seasonal variations, successfully establishing trees on berms could require watering over and above this rate due to low infiltration rates associated with heavily sloped landscapes.

In general, trees that have been planted on berm areas in the past have struggled over time, suffering from drought stress and a susceptibility to disease and insects, often resulting in premature mortality. As much as possible, Urban Forestry applies the “right tree, right place” approach to tree planting so that the environmental and economic benefits associated with successfully planted healthy trees can be realized and sustained at low cost over the long term. Urban Forestry does not recommend planting on the right of way area south of Attridge Drive between Berini Drive and McOrmond Drive, given the conditions associated with the planting location and high mortality rate that trees experience at many similar right of way/berm locations. If there was direction to explore this further, any consideration for planting any trees along this stretch would require additional funding to prepare any locations that could be deemed appropriate for planting (i.e. leveling, topsoil, etc.), plus the costs for planting the trees, the establishment regime and ongoing care and maintenance of the trees.

### **FINANCIAL IMPLICATIONS**

Resources to sustain a berm mowing or tree planting service level adjustment, if desired, could be brought forward for consideration in future budget years.

With regards to berm mowing, if an additional fourth contracted mow is warranted, an additional budget allocation of \$18,000 would be required. For additional tree planting on berms, additional funding would also be required, at an estimated cost of \$700 to \$1,000 plus, per tree depending on the conditions of the location and the length of the required establishment regime. If the initial tree planting is funded, it is also recommended a new berm tree service level be developed and funded, to address the ongoing costs associated with pruning, removal and replacement requirements associated with these types of tree plantings.

### **OTHER IMPLICATIONS**

There are no other implications.

### **NEXT STEPS**

If desired, direction can be given to increasing these service levels during the next budget cycle or to investigate the potential of reallocating existing resources from other areas.

**REPORT APPROVAL**

Written by: Konrad Andre, Performance Improvement Coordinator, Parks

Reviewed by: Darren Crilly, Director of Parks

Approved by: Lynne Lacroix, General Manager, Community Services Department

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