Agenda – Council – July 23, 2020

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – July 7, 2020

Item No. 3 Public Works Maintenance and Naturalization of Green Space – Fermor Avenue (St. Boniface Ward)

STANDING COMMITTEE RECOMMENDATION:

On July 15, 2020, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Infrastructure Renewal and Public Works and submitted the following to Council:

1. That the Public Service proceeds with the naturalization project based on Option B, as set out in this report, for vegetation management of selected areas along Fermor Avenue.

2. That an ecological and financial analysis be completed comparing the Fermor Project (Option B) to the practice of regular turf mowing and that the Public Service report back on the matter to the Standing Policy Committee on Protection, Community Services and Parks by the end of 2023.

3. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – July 7, 2020

DECISION MAKING HISTORY:

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On July 15, 2020, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Infrastructure Renewal and Public Works and submitted the matter to Council.

STANDING COMMITTEE RECOMMENDATION:

On July 7, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Winnipeg Public Service and submitted the matter to the Executive Policy Committee and Council.

Councillor Lukes, Waverley West Ward, submitted a communication with respect to the matter.

On January 7, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Riel Community Committee, with the following amendment:

- Replace the words “120 days” with “180 days”

COMMUNITY COMMITTEE RECOMMENDATION:

On December 13, 2019, the Riel Community Committee passed the following motion:

WHEREAS the Parks and Open Space Division mowing schedules have lengthened over the years, as the operating budget has not kept pace;

AND WHEREAS there are numerous green spaces in Winnipeg which are “passive” and generally unused, existing only for aesthetic purposes;

AND WHEREAS the City of Winnipeg is subject to the same commercial pesticide bans as homeowners and thus has had difficulty controlling weeds and dandelions;

AND WHEREAS native plants and flowers are beneficial to wildlife and urban ecosystems including pollinators;

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DECISION MAKING HISTORY (continued):

COMMUNITY COMMITTEE RECOMMENDATION (continued):

AND WHEREAS other municipalities have had success reducing their maintenance liabilities and expenses with this approach;

AND WHEREAS preservation of natural areas to support climate mitigations is identified as Strategic Opportunity #7, Community Climate Resiliency, in the City of Winnipeg's Climate Action Plan;

THEREFORE BE IT RESOLVED that the Standing Policy Committee on Infrastructure Renewal and Public Works be requested to direct the Public Service to report back within 120 days on the following:

1. Options for converting or naturalizing portions of the green space buffering both sides of Fermor Avenue from Lagimodiere Avenue to the intersection with the Seine River, including perennials, flowers, and/or native plant species.

ADMINISTRATIVE REPORT

Title: Naturalizing Areas along Fermor Avenue

Critical Path: Standing Policy Committee on Infrastructure Renewal and Public Works – Executive Policy Committee

AUTHORIZATION

Author	Department Head	CFO	CAO
D. Domke	J. Berezowsky	P. Olafson, Interim CFO	M. Ruta, Interim CAO

EXECUTIVE SUMMARY

There are numerous regularly-mowed areas within Winnipeg that have a passive use and for which alternative vegetation options could be considered. A range of options exists for how vegetation can be naturalized and the definition of success may be different depending on the option used. The costs to achieve success have not had full analysis and at this point can't be accurately compared to standard mowing practices. For the purpose of this analysis, the options for naturalization have been divided into three groupings; Option A – Reduce or Eliminate Mowing, Option B – Enhance Existing Vegetation, and Option C – Full Native Grassland Installation.

Option B is recommended along Fermor as it is likely most beneficial from a biodiversity perspective and would provide an example of naturalization possible along a typical transportation corridor. Installation of Option B along Fermor can take place utilizing existing operational resources in 2020.

While cost savings are a factor to consider, naturalization projects may be best viewed for the environmental and ecological benefits they provide.

RECOMMENDATIONS

1. That the Public Service proceeds with the naturalization project based on Option B, as set out in this report, for vegetation management of selected areas along Fermor Avenue.

2. That an ecological and financial analysis be completed comparing the Fermor Project (Option B) to the practice of regular turf mowing and that the Public Service report back on the matter to the Standing Policy Committee on Protection, Community Services and Parks by the end of 2023.

3. That the proper officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

REASON FOR THE REPORT

On January 7, 2020 the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Riel Community Committee, as amended, and directed the Winnipeg Public Service to report back within 180 days on the following:

1. Options for converting or naturalizing portions of the green space buffering both sides of Fermor Avenue from Lagimodiere Avenue to the intersection with the Seine River, including perennials, flowers, and/or native plant species.

IMPLICATIONS OF THE RECOMMENDATIONS

The cost of the project is $5,000.00, and will be funded by the Public Works Department Parks and Open Space Division operating budget. Implementation of naturalization along the proposed sections of Fermor would result in visual changes to the vegetation along these areas. Complaints may be generated from residents as it may appear that the City is not maintaining its mowing standards. On the other hand, the success of wildflowers in some areas may generate support and enhance the experience for some pathway users along these sections.

The implementation of the naturalization project will be beneficial for pollinators and increase this area's ecological value.

The project will be evaluated for success based on the cost of installation and long term maintenance in comparison with standard mowing operations.

HISTORY/DISCUSSION

Regular mowing to achieve a green lawn of grass has been used as a widespread standard maintenance practice for many years. This type of vegetation management is relatively straightforward, and provides a recognized appearance that could be described as neat and tidy.

However, regular mowing is detrimental from an ecological perspective in many cases, and there are many passive greenspaces where the elimination or modification of mowing could be considered. Regular mowing has the effect of reducing biodiversity, flowers and pollen from the landscape which in turn has a negative effect on pollinators and the overall natural food chain. Mowing also results in the burning of fossil fuels and the release of hydrocarbons into the atmosphere which adds to air pollution and greenhouse gases. A reduction in mowing could be a step towards reducing carbon emissions and mitigating climate change.

In Winnipeg's past, there have been a number of alternative vegetation attempts. While some of these projects have been extremely successful, others have not. The costs to modify existing turf to naturalized areas can vary and the cost of maintaining these naturalized areas may also be varied. One thing that is apparent is there is a lack of accurate data to determine whether naturalizing passive turf areas will result in a cost saving.

The green space buffering both sides of Fermor Avenue from Lagimodiere Avenue to the intersection with the Seine River consists of both right-of-way and parkland. The Fermor Buffer Park provides an excellent opportunity to conduct a naturalization pilot project which will test the

ability to produce success from an ecological perspective while also reducing maintenance effort and costs associated. It is similar to much of the corridor along Fermor, but has the advantage of providing a larger expanse of turf between the Niakwa trail and the ditch which is the most desirable area for a naturalization project. The area is illustrated in Appendix A.

While methods and options for naturalizing grassland are varied and can be implemented through different approaches or scaled to a variety of situations, they have been grouped into three options below. These options have all been utilized in the past and are ongoing at various locations. The opportunity to add a site using Option B at Fermor Buffer Park would further our understanding of the costs and maintenance issues associated with these options by adding a site along a well-used transportation corridor.

Option A. Reduce or eliminate mowing

In some areas, the simplest solution is simply to stop mowing. Unless adjacent to an existing natural area, if the area has been regularly mowed for a number of years the plant community will not generally revert to a naturalized environment containing native plants. It is most often that weed issues related to Canada thistle will develop. If Canada thistle issues develop and affect neighbouring properties, the site will need to be rough cut at least twice per year. Alternate thistle control measures, such as herbicide use, may also be considered in addition to or as an alternative to cutting.

Option A has been utilized in many locations and for a variety of reasons. Many parts of the Bishop Grandin corridor currently fall within this option and are an example of this type of naturalization where issues with weeds require follow up with one to two cuts per season. The slope of the retention pond in Burland Park is another example where this method has been used and no cutting is currently used to control weeds.

There are no capital costs to implement this option, however, the maintenance costs are dependent on aesthetic and weed issues that may develop.

Option B. Enhance Existing Vegetation

This involves the planting of wildflower plugs or potted plants within limited areas of existing vegetation. It can also include light tillage and seeding with a mixture of native species. The goal is to increase biodiversity and pollinator habitat with the hope that the wildflowers will also spread into larger areas of the existing vegetation. This option is used in combination with Option A, and can also result in the need to manage Canada thistle. Rough cutting of the thistle is limited as a management option due to the desire to not mow down the wildflowers planted in the area. Thistle management must be more targeted either through spot spraying or targeted cutting. The benefit of this option is that it can create a colourful biodiverse environment which provides excellent pollinator habitat.

A number of versions of this option have recently been installed at various locations. The best comparable site recently installed would be at Lagimodière Park, where the slope along a portion of the pond was seeded and has had wildflower nodes installed. Adding a similar project along Fermor would help determine cost and success for this type of option.

The estimated cost for installation of this option may range from $0.80 to $1.90 per m^2 depending on seeding techniques used and the amount of wildflower nodes installed. Long term maintenance costs are yet to be determined.

Option C. Full Native Grassland Installation

This involves removing the existing vegetation through the use of herbicides and maintaining it vegetation-free for two seasons to eliminate the maximum amount of weeds from the seed bank. The area is then seeded with a mix of native grasses and managed for two to three years until native grasses are fully established and will out-compete most non-native weed introductions. This type of vegetation provides an aesthetically consistent look when installed correctly and a long term community of native grasses. It is however still susceptible to Canada thistle infestations. Herbicide usage is required for thistle control and controlled burns are utilized at approximately 5-year intervals to maintain the health of the native grass community.

This treatment has been used at a large number of locations. It has become the standard vegetation used around naturalized retention ponds within new developments, including widespread use in Waverley West, Royalwood and Sage Creek. A recent installation along Keewatin Street/Dr. Jose Rizal Way also provides an example of a location where it has been used exclusively along a transportation corridor as alternative vegetation.

The cost of installation ranges widely depending on the size of the area for installation and difficulty in establishment due to existing plant communities. Depending on the site and complexity, installation may range from $4.00 - $16.00 per m^2. Long term maintenance costs have yet to be determined but are estimated based on the requirement for periodic burning and some weed control.

The installation cost of applying Option B to select areas along Fermor is estimated at $5,000.00. The cost of the project will be absorbed in the Naturalist Services budget. Option B provides the best opportunity to increase biodiversity and pollinator habitat along Fermor. It will also provide an excellent example of how this type of naturalization can be used along transportation corridors in the future.

FINANCIAL IMPACT

Financial Impact Statement

Date: May 19, 2020

Project Name:
Naturalizing Areas along Fermor Avenue

First Year of Program **2020**

	2020	2021	2022	2023	2024
Capital					
Capital Expenditures Required	$ -	$ -	$ -	$ -	$ -
Less: Existing Budgeted Costs	-	-	-	-	-
Additional Capital Budget Required	$ -	$ -	$ -	$ -	$ -
Funding Sources:					
Debt - Internal	$ -	$ -	$ -	$ -	$ -
Debt - External	-	-	-	-	-
Grants (Enter Description Here)	-	-	-	-	-
Reserves, Equity, Surplus	-	-	-	-	-
Other - Enter Description Here	-	-	-	-	-
Total Funding	$ -	$ -	$ -	$ -	$ -
Total Additional Capital Budget Required	$ -				
Total Additional Debt Required	$ -				
Current Expenditures/Revenues					
Direct Costs	$ 5,000	$ -	$ -	$ -	$ -
Less: Incremental Revenue/Recovery		-	-	-	-
Net Cost/(Benefit)	$ 5,000	$ -	$ -	$ -	$ -
Less: Existing Budget Amounts	5,000	-	-	-	-
Net Budget Adjustment Required	$ -	$ -	$ -	$ -	$ -

Additional Comments:

Direct costs in 2020 represent the estimated amount to implement Option B. Ongoing maintenance costs in future years will be in addition to the amounts identified in this report and have yet to be determined. All costs associated with naturalizing areas along Fermor Avenue will be charged to the Public Works Department Parks and Open Space Division operating budget.

"Original signed by J. Peters, CPA, CGA"
J. Peters, CPA, CGA
Acting Manager of Finance & Administration

CONSULTATION

This report has been written in consultation with: N/A.

OURWINNIPEG POLICY ALIGNMENT

The report is in accordance with direction strategies of A Sustainable Winnipeg:

- 09 Continue to Respect and Value Our Natural and Built Environment
- Direction 5 Provide Safe and Effective Pest and Weed Control in City Operations

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

The report is in accordance with Strategic Opportunity #7:

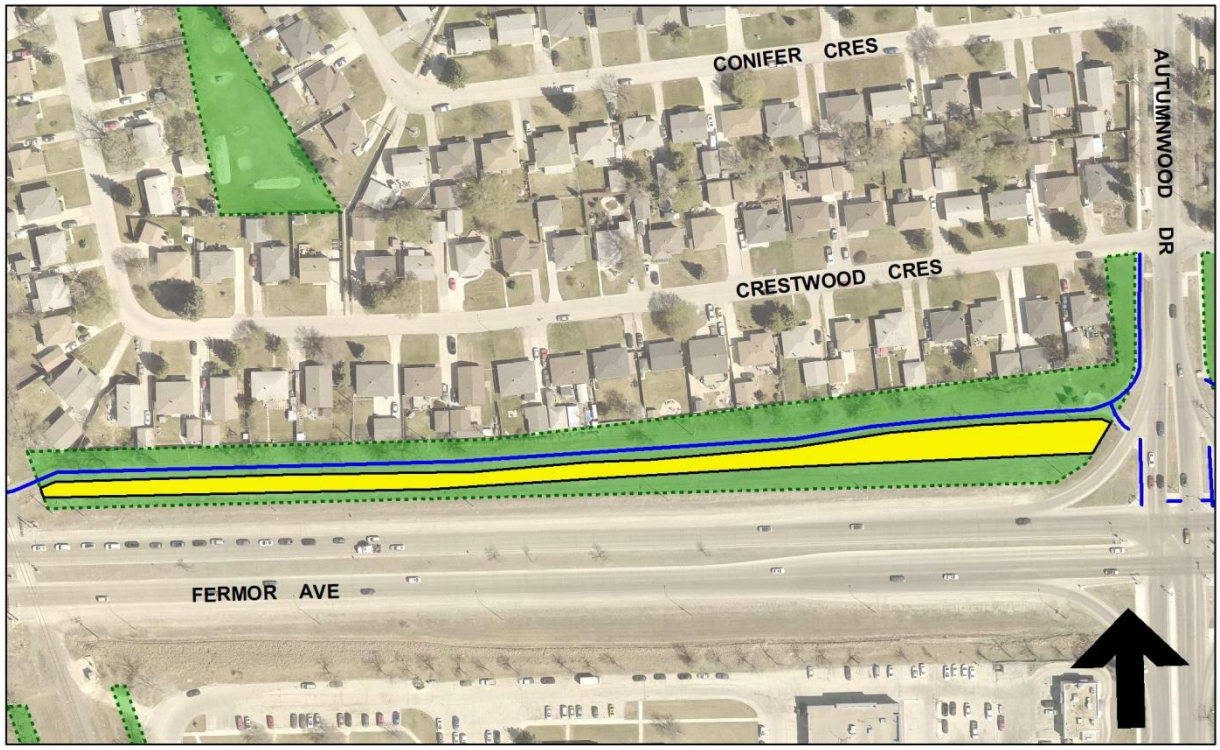
- 7.1 Implement Opportunities to Improve Winnipeg's Resilience and Adaptability to the Effects of a Changing Climate (Primary Responsibility: Office of Sustainability)
- 7.3 Preserve and Manage Parks and Natural Areas to Support Climate Change Mitigation (Primary Responsibility: Public Works - Parks).

SUBMITTED BY

Department: Public Works
Division: Parks and Open Space
Prepared by: R Penner / P Mutch
Date: May 20, 2020

Attachment: Appendix A - Proposed Naturalization Area along Fermor Ave.

Appendix A
Proposed Naturalization Area along Fermor Ave.



0.00 0.02 0.04 0.06 0.08
Kilometers

Fermor Buffer Park - Proposed pilot project (2700m2)

Legend
Active Transportation Trail
Pilot project location
Park Space