

City of Kingston Information Report to Environment, Infrastructure & Transportation Policies Committee Report Number EITP-24-017

To: Chair and Members of the Environment, Infrastructure &

Transportation Policies Committee

From: Brad Joyce, Commissioner, Infrastructure, Transportation &

Emergency Services

Resource Staff: Karen Santucci, Director, Public Works & Solid Waste

Date of Meeting: April 9, 2024

Subject: Little Forests Pilot Program

Council Strategic Plan Alignment:

Theme: 2. Lead Environmental Stewardship and Climate Action

Goal: 2.3 Maintain the City's natural heritage and environmental assets.

Executive Summary:

Developed by Dr. Akir Miyawaki, 'little forests' are a unique planting method which have multiple layers of plantings to mimic a natural forest. Little forests provide benefits such as cooling streets during periods of extreme heat, storing carbon, cleaning the air, reducing noise, and soaking up rainwater. Little Forests Kingston is a very active community group that has been instrumental in planting over 5,000 trees since 2021, through several little forest plantings. One of these plantings was on City land at the Seniors Centre on Francis Street.

Little Forests has focused on two main types of plantings – larger little forests like the one at the Seniors Centre and pocket forests. Pocket forests are smaller, multi-layered forests consisting of 12 to 25 trees and shrubs. The City can support Little Forests Kingston in the planting of both little forests and pocket forests. This support can include assisting with educational signage, funding of pocket forests on public lands, and development of processes that help to ensure future plantings of little forests.

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Recommendation:

This report is for information only.

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Authorizing Signatures:

ORIGINAL SIGNED BY COMMISSIONER

Brad Joyce, Commissioner, Infrastructure, Transportation & Emergency Services

ORIGINAL SIGNED BY CHIEF ADMINISTRATIVE OFFICER

Lanie Hurdle, Chief Administrative Officer

Consultation with the following Members of the Corporate Management Team:

Paige Agnew, Commissioner, Growth & Development Services

Jennifer Campbell, Commissioner, Community Services

Neil Carbone, Commissioner, Corporate Services

Not required

David Fell, President & CEO, Utilities Kingston

Not required

Peter Huigenbos, Commissioner, Major Projects & Strategic Initiatives

Not required

Desirée Kennedy, Chief Financial Officer & City Treasurer

Not required

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Options/Discussion:

Background

Little Forests are collaborations between plants, soil, microorganisms, climate, geology, land, and people. Drawing inspiration from nature, the little forest approach rapidly regenerates native forest communities by introducing all the relationships present in a healthy forest ecosystem — from the canopy of the tallest trees down to the underground life populating the soil, and all layers in between. Because of their density and biodiversity, (over 30 different species of native trees and shrubs), little forests can transform even the smallest urban spaces into thriving biodiverse ecosystems that offer refuge for a multitude of insects, pollinators, birds and other wildlife. Storing carbon, purifying the air, absorbing noise, reducing stormwater runoff, and cooling streets during hot spells are just some of the benefits of little forests. A little forest is more than just a planting of trees.

The little forest planting approach was developed over 40 years ago based on the work of Dr. Akir Miyawaki, who oversaw the planting of over 30 million trees in thousands of locations. The Miyawaki method condenses what might normally take nature 100 to 200 years to return an area back to a forest, into 15 to 25 years. The plantings do not have to be large; they can be the size of a tennis court, or even smaller. These minuscule forests are mighty however, containing hundreds of plants and leading to increased biodiversity.

Little forests are not substitutes for natural ecosystems or forests; however, with a clear understanding of their potential as well as their limitations, they complement and support other conservation and reforestation approaches, help to regenerate degraded landscapes, and enhance our cities. Little forests are small-scale, local interventions that are manageable, actionable, and timely. Little forests allow residents to think globally and act locally.

Little forests, also sometimes referred to as mini forests, are popping up all over Ontario and Canada including such cities as Hamilton, Cornwall, Toronto, and Markham. A local grassroots organization, Little Forests Kingston (LFK), is quickly being recognized for their tremendous efforts in establishing a number of little forests over the past couple years in our city. In 2021 Little Forests Kingston received Nature Canada's partner of the year award.

This community-run organization has knowledgeable, enthusiastic volunteers whose goal is to work with others to make Kingston a city within a forest. Little Forests Kingston was founded in 2021 and within the past year was able to plant five little forests and launch a pocket forest initiative. One of the other goals of LFK is to build stewardship, collaborating with organizations during the planning, planting, maintenance, and care of the little forests. For LFK, planting little forests is an act of reconciliation, the land acknowledgement embodied. Their work is infused by the teachings of Indigenous Ways of Knowing.

In 2023, LFK initiated the planting of smaller, multi-layered forests called pocket forests. This involves a planting kit which includes a number of native trees, understory and shrub species

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which are specifically selected to be planted together. Pocket forests are densely planted, multilayered forest communities. They reconnect fragmented habitats, restore biodiversity, and build climate resilience. Planted in small areas such as a backyard, these pocket forests can transform lawns and small spaces into biodiverse, pollinator-supporting, food-producing, self-sustaining greenspaces.

Since 2021, LFK has planted over 5,000 trees in Urban Kingston through five different little forest planting sites. In 2023 they planted 12 pocket forests and planted the Portsmouth Community little forest at 56 Francis Street on City land behind the Seniors Centre. The planting has over 1,500 trees planted in three distinct zones consisting of a walking forest, a great lakes forest and a bird forest. This little forest was planted in collaboration with the Seniors Association. Funding for this project came from Green Communities Canada.

Analysis

Little forests are a different planting method then currently used by the City. There are not many well-established little forests within Canada since the planting method is relatively new. LFK is currently planting both little forests and pocket forests, and the City would benefit in partnering with them to have these put on public and private lands. It is particularly timely as over the past two years the City has not been able to sell all of the 3,600 trees allocated to the Neighbourhood Tree Program.

Staff are proposing to partner with LFK for the planting of 50 pocket forests on privately owned lands within the urban boundary. A pocket forest is generally nine trees and shrubs however the number can vary from 6 to 45, dependant on the style of pocket forest and the size of the yard. In addition to this, a pocket forest could be planted at the site of the new pollinator garden in Meadowbrook Park, or other naturalized areas in which pollinator gardens are established. Pocket forests within these naturalized areas would have educational signage placed by the City.

With the aid of many volunteers, LFK planted the first little forest on City property at the Seniors Centre at 56 Francis Street. Public Works will look at assisting LFK with the development and placement of signage at this site to help educate residents on the benefits and planting of little forests. In addition, a bench is being placed within the little forest area recognizing the efforts of Little Forests Kingston.

The Community Gardens Development and Operations Policy is currently under review and will go to the Arts Recreation and Community Committee before the end of 2024. This policy will break out little forests into two sections. Edible little forests will fall under the section which applies to all food producing gardens on municipal lands. An additional section will be added to the community gardens policy which applies to non-food producing little forests and pollinator gardens. This section will be managed by Public Works but will require the approvals from various City Departments and specify legal and insurance requirements.

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Public Works will continue to work with LFK in the review of potential areas for additional little forest projects.

Public Engagement

Public engagement would occur prior to the planting of any little forest on public lands as per the Community Garden Development and Operations Policy.

Climate Risk Considerations

As trees grow, they help stop climate change by removing carbon dioxide from the air, storing carbon in the trees and soil, and releasing oxygen into the atmosphere. Little forests and pocket forests both address climate adaptation by reducing the urban heat island effect, slowing and storing stormwater during extreme rain events, making for a more liveable city. These plantings are resilient to high winds, as the roots knit together in the soil to hold the trees together. Partnering with Little Forest Kingston aligns with Council's strategic direction of leading environmental stewardship and climate action as this would nurture biodiversity, respond to the climate crisis, restore native species back to the land, and support the restoration of the soil.

Indigenization, Inclusion, Diversity, Equity & Accessibility (IIDEA) Considerations

Any signage and benches placed at partnered little forest or pocket forest sites, including 56 Francis Street, will meet the accessibility standards and be provided in both official languages.

Existing Policy/By-Law

Community Gardens Development and Operations Policy

Financial Considerations

Funding for the pocket forest initiative will be funded using money currently available through the Neighbourhood Tree Program. Funding for signage will be available through the current operating budget for Public Works. Additional little forest projects will be funded through the regular annual budget submission.

Contacts:

Karen Santucci, Director Public Work & Solid Waste, 613-546-4291 extension 1856

Other City of Kingston Staff Consulted:

Tony Gargaro, Manager, Recreation Services, Community Services

Julie Salter-Keane, Manager, Climate Leadership, Growth & Development Services

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Exhibits Attached:

None