



The Coull/Kneale Property

1386 Port Cunnington Road, Lake Of Bays

Planting plan created by The District Municipality of Muskoka

Survey Date: 12/09/2019





Schedule A:

Plants & Property

Land Characteristics

This planting plan is designed based on the land characteristics identified during the day of the site visit. Plants are chosen according to the soil and light conditions on your property. The number of plants chosen for each planting compartment takes into account the square metre area of the space, as well as the amount of current vegetation cover. **Your property is part of ecoZone: 5b**

Land Characteristics by Compartment

	Length	Width	Area	pH	Soil	Moisture	Light	Height
A	8.5m	6.5m	55.2m ²	acidic	clay	normal	partial sun	any
B	3.4m	1.5m	5.1m ²	acidic	clay	normal	partial sun	max 3m
C	3.75m	7.5m	28.1m ²	acidic	sandy	normal	full sun, partial sun	any
D	3.2m	5.5m	8.8m ²	acidic	sandy	normal	full sun, partial sun	any
	18.85m	5.25m	97.2m ²					

Plant Selection Summary

The following shrubs and trees are chosen for their suitability and survivability given the current soil and light conditions in each compartment on your property, as well as preferable features.

Plant Species	A	B	C	D	Potted	Bareroot	Wildflower
Shining Willow	4				4		
Narrow Leaved Meadowsweet	8				8		
Red Oak	1				1		
Canadian Serviceberry	2		2		4		
Silky Dogwood	2		1		3		
Pussy Willow	2				2		
Yellow Birch	1				1		
Sweet Gale	1				1		
Blue Flag Iris	2						2
Red Osier Dogwood		3	3		6		
Witch Hazel		1			1		
Bush Honeysuckle			9		9		
Smooth Wild Rose			5		5		
Snowberry				3	3		
Alternate-Leaved Dogwood				1	1		
Nannyberry				2	2		
Subtotal	23	4	20	6	51	0	2
Totals		53					

Plant Information

The following table summarizes key information about each plant selected for your property.



Shining Willow

Height: 10m

The Shining Willow is a relatively large deciduous shrub, which grows up to 10 m in height. The shiny leaves are 5-11 cm long and 1-5 cm wide, which are what give this Willow its name. They are lance shaped, with dark green color on the top, and light green on the bottom. Flowers bloom from May to June and range in colour from yellow to a green/brown.



Narrow Leaved Meadowsweet

Height: 1-2m

The Narrow Leaved Meadowsweet is an erect, deciduous shrub, which grows in the shape of a mound to a height of 1-2m. This species develops numerous branches and branchlets, giving it a sparse appearance. Leaves produced are simple and narrow with sharply toothed borders growing alternately along the branches. These bright, light green leaves appear crowded, as they grow close together on the stocks and branches. During the fall, leaves turn a yellow-red or yellow-orange colour. Small white to light pink flower clusters appear in the spring growing in a dense, narrow pyramid at the terminal ends of the branches. During late summer to early fall, these flowers produce smooth, papery seed pods.



Red Oak

Height: 30m

The Red Oak, also referred to as the Northern Red Oak or Champion Oak, is a slow growing, hardwood, deciduous tree found throughout Eastern and areas of Central Ontario. This species can grow to be quite tall reaching 30m and has a single, large trunk. The bark is smooth, dark gray in colour, and develops deep ridges with age. The crown of the Red Oak is created by several main branches as well as horizontal and ascending branches. It is uneven and irregular, but generally round in form. Leaves produced are between 10-20 cm long with 7-9 sharp and pointed lobes. During the summer, the leaves are a dull green but in the fall turn a brilliant deep red to yellow-orange. The Red Oak is monoecious, producing male and female flowers on the same tree. Male flowers produced are hanging catkins growing from the leaf axils of the previous year, while the female flowers are grown from the leaf axils of the current year. Fruiting bodies produced by this species are 3 cm long, round shaped acorns with a scaly cap covering a quarter of the body. Red Oak Acorns require approximately two years to reach maturation.



Canadian Serviceberry

Height: 3-5 m

The Canadian Serviceberry is a multi-stemmed shrub or small tree which grows from 3-5 m in a dense round form. This plant may also be known by the common names: Juneberry, Shadblow, or Shadbush. Early in the spring, prior to leaf development, clusters of fragrant, showy white flowers bloom along the branches. By July, these flowers give way to the fruiting bodies. The fruits are initially small, green berries, which grow to the size of blueberries and turn a deep purple-blue upon maturation during the fall. Leaves produced are finely toothed and spear-shaped. Throughout the summer, leaves are dark green and turn a dramatic orange-red during the fall.



Silky Dogwood

Height: 2-4m

The Silky Dogwood is a large, deciduous shrub species native to Eastern North America that reaches a height of 2-4m. This species produces a rounded shape due to its numerous upright branches stemming from a central, multi-stemmed base. Branches which grow touching the ground can develop their own root system, often creating thickets. During the spring and summer, branches are a shiny, light green colour and change to a red colour during the fall and winter. This species produces simple, lance-shaped leaves arranged oppositely along the branches. During the spring and summer, the foliage is a deep green colour and turns dark red-purple during the fall prior to dropping. Small, yellow-white flowers bloom during mid-June, maturing into bright blue berries in September. This species of Dogwood grows best alongside Willow when being planted to mitigate erosion and stabilize shorelines.



Pussy Willow

Height: 6m

The Pussy Willow is a fast growing, deciduous shrub or small tree found reaching heights of 6m, and is from British Columbia to Newfoundland. This species grows from shoots extending from the base of the trunk, creating a multi-stemmed, tall, round bush. The Pussy Willow is an ideal species for bank stabilization and erosion control due to its large, fibrous root system and love of water. This species branches extend from the main shoots and are usually hairy and reddish-brown in colour. The main shoots of Pussy Willow are smooth and greyish-brown, becoming scaly with age. It produces simple, narrow, lance-shaped leaves alternately arranged along the branch. The Pussy Willow yields purple-brown fuzzy catkins which will form long-beaked and finely haired capsules during May and June.



Yellow Birch

Height: 25 m

Yellow Birch is a native deciduous tree species that can grow up to 25 m in height. The bark is thin, flaky, shiny, and can be brownish-yellow, bronze, or silvery colored. The leaves are deep greenish-yellow, simple, alternately arranged, oval shaped, have doubly serrated edges, and are about 8-11 cm long. This tree species produces catkins in April-May, which are slim, cylinder shaped, yellowish brown flower clusters. In the Fall, seed pods are produced that are brown colored, cone shaped, and break apart easily. Yellow Birch is a slow growing tree but can live up to 150 years. This tree species is beneficial to wildlife species like birds and mammals.



Sweet Gale

Height: 1-2m

Sweet Gale is a medium-sized shrub which grows into a thick bush about 1-2 m tall. This species produces 1-8 cm long, oblong-lanceolate leaves which are finely toothed at the tip and are spirally arranged. When bruised, these leaves give off a pleasant aroma. Male and female catkins are produced on separate plants. The seeds are dispersed from the female plants via water, as they float on two corky bracts. This shrub also provides a good food source for bird species that eat the seeds including Grouse, Chickadees, and Bluebirds. Mammal species like Beavers and White-Tailed Deer also browse on the twigs and leaves of this plant.



Blue Flag Iris

Height: 0.5 m

The Blue Flag Iris is a showy perennial wildflower that typically grows about 0.5 m in height. This plant may also be known by the common name Harlequin Blue Flag. The leaves are light green, sword-shaped, slightly arched or erect, and appear growing out as a cluster around the base of the plant. The attractive blue flowers start to bloom in the early spring, emerging from a tall flowering stalk that can reach up to 1 m. The flowers are beneficial to pollinator species, like bees and butterflies. The seeds are also beneficial to wildlife species, like birds and small mammals.



Red Osier Dogwood

Height: 1.5-4m

The Red Osier Dogwood is a medium-sized, deciduous shrub native throughout Northern and Western North America which typically grows to 1.5-4m. This species is multi-stemmed with numerous erect and ascending bright red branches that create a loose and spreading form. Leaves produced are simple, two-toned with a dark green upper side and light green underside. They are arranged opposite each other along the branches. During the fall, the foliage turns a brilliant red to dark purple. Clusters of small, creamy white flowers form on the terminal ends of the branches between June and July. The Red Osier Dogwood produces blueish-white fruiting bodies during late summer, which may persist throughout the winter. This shrub's berries provide an important winter food source for numerous species, from large deer to small wintering birds.



Witch Hazel

Height: 4-9m

The Witch Hazel is a deciduous understory shrub, with a broad and rounded crown which typically grows 5-9m. This species can sometimes take on the form of a tree. Witch Hazel is most recognizable for its 2 cm long, spidery, bright yellow flowers, which bloom during late fall. Leaves produced are alternate, simple, 6-15 cm in length, and obovately shaped. These leaves are dark green on top with paler undersides and turn yellow during the autumn. Witch Hazel leaves produce hairs on their principal veins, are asymmetrical at their base, scalloped, and sometimes coarsely toothed. In addition, the leaves contain 5-7 straight, parallel, ascending veins per side. The twigs are slender, zigzagged, tawny, and smooth when mature. Witch Hazel fruiting bodies are short, thick, light brown capsules that become woody upon maturation. This species is typically multi-stemmed with two or more trunks, which are crooked and 10-15 cm in diameter.



Bush Honeysuckle

Height: 1m

The Bush Honeysuckle is a small, hardy, deciduous shrub that rarely grows taller than 1 m in height. The leaves are simple, oppositely arranged, ovate shaped, and have finely toothed margins. During the spring and summer, the leaves are dark green in colour, then in the fall they take on a variety of colours ranging from a deep purple to light yellow. The flowers are small, showy, yellow to orange colored, trumpet shaped, appear in clusters on the tips of branches, and bloom between June and July. The flowers are beneficial to pollinator species, including hummingbirds and butterflies. The roots of the Bush Honeysuckle are fibrous, giving it the ability to form thickets and making it an ideal shrub to plant for erosion control.



Smooth Wild Rose

Height: 1.5m

The Smooth Wild Rose is a shrub species that grows about 1.5 m tall. The name is derived from the fact that it is almost thornless with only a few sharp thorns present near its base. This native shrub is best known for producing beautiful pale pink flowers with five saucer-like petals surrounding a yellow center. The Smooth Wild Rose produces bright red rose hip fruiting bodies which develop during the summer and persist throughout the winter. Leaves produced are alternate and compound, consisting of 5-7 serrated, egg-shaped leaflets.



Snowberry

Height: 1-2m

The Snowberry is a small shrub known for its white berries bunching at the nodes. This species produces oval-shaped, oppositely arranged, dark green colored leaves with smooth margins on short stalks. The shrub grows 1-2m in height. This shrub yields white to pink clusters of bell-shaped flowers during the summer. The fruiting bodies produced by this shrub are small, white berries that grow in bunches. These berries provide a good food source to a variety of animals, but are poisonous to humans. Snowberry is an ideal species for bank stabilization applications because its roots are vigorous and deep ranging. .



Alternate-Leaved Dogwood

Height: 5-10 m

The Alternate-Leaved Dogwood is a tall, deciduous shrub or small tree species that can grow 5-10 m in height. This plant may also be known by the common name Pagoda Dogwood. It can be grown either in the form of a single stem tree or multi-stemmed shrub comprised of two or three smaller trunks. The leaves are ovate shaped, alternately arranged, have prominent veins, have a pointed tip, and have entire margins. The flowers are showy, fragrant, whitish yellow, appear in flat clusters, and bloom between May and June. These flowers produce clusters of dark blue berries. The flowers are beneficial for pollinator species while the berries are beneficial for wildlife species. The root system is valuable for controlling erosion and stabilizing loose soil. This plant is often used as a small ornamental tree in landscaping. The common name comes from the fact that all other Dogwood species have oppositely arranged leaves.



Nannyberry

Height: 3 m

Nannyberry is a large deciduous shrub species that typically grows about 3 m in height. The leaves are dark green, ovate shaped, oppositely arranged, have a pointed tip, and have finely toothed margins. The flowers are showy, white colored, appear in flat topped clusters, and bloom in May. These flowers produce blueish black berries, which are edible to humans and persist throughout the winter. The flowers are beneficial to pollinator species, like bees and butterflies. The fruit is beneficial to wildlife species, including birds and small mammals. This shrub has attractive fall foliage. The root system is extensive, making this plant valuable for controlling erosion and stabilizing loose soil. This shrub can be pruned to have a single stem and grown as a small tree instead of a shrub.

Compartment A

Naturalization Area

Erosion issues; Deer issues

- ⚖️ PH: acidic
- 🌱 DEPTH: potted
- 💧 MOISTURE: normal
- 🌀 SOIL TYPE: clay
- 📏 PLANT HEIGHT: any
- ☀️ LIGHT CONDITIONS: partial sun



Shining Willow

4



Red Oak

1



Silky Dogwood

2



Narrow Leaved Meadowsweet

8



Canadian Serviceberry

2



Pussy Willow

2



Yellow Birch

1



Sweet Gale

1



Blue Flag Iris

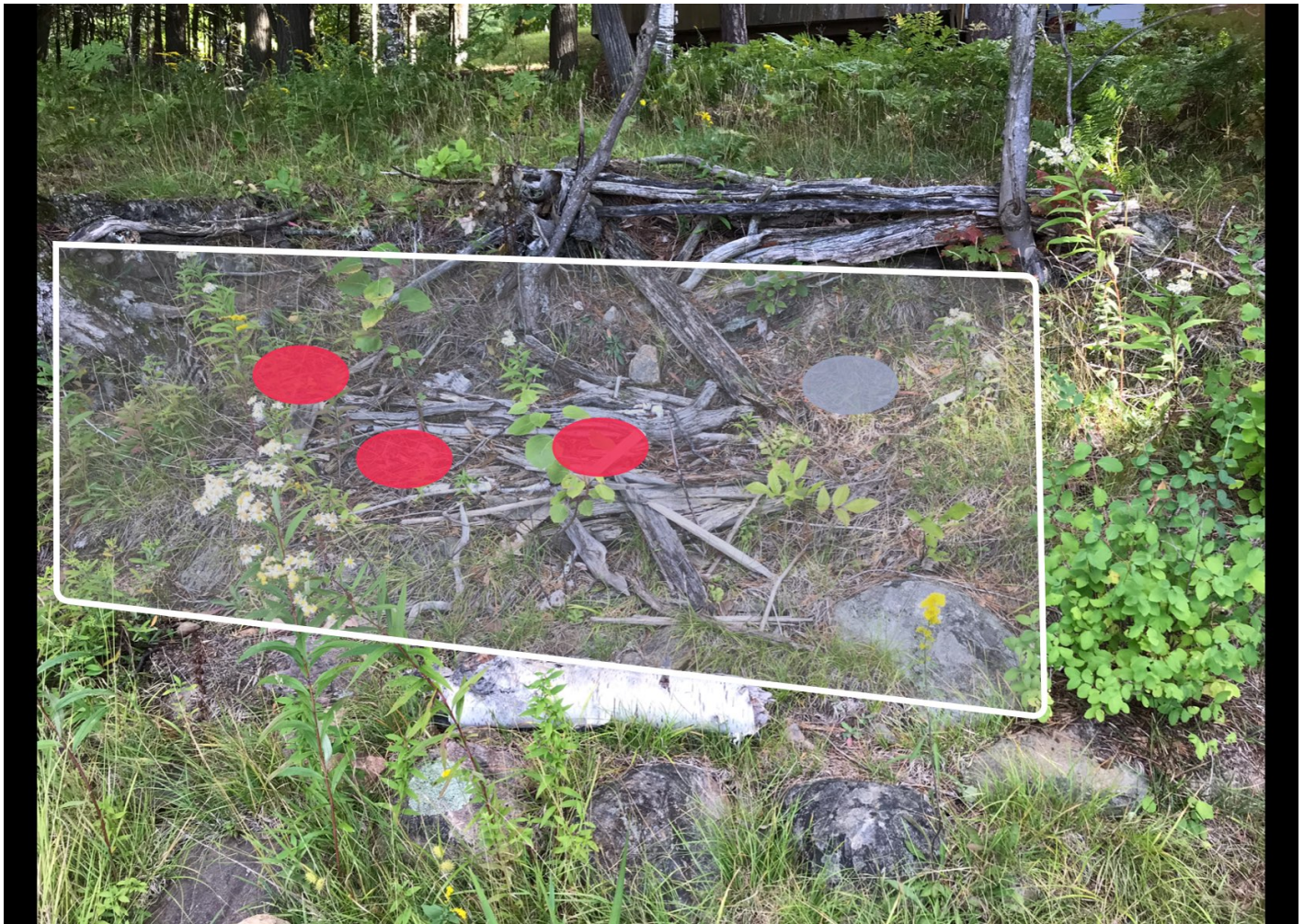
2

Compartment B

Naturalization Area

Erosion issues; Deer issues

- ⚖️ PH: acidic
- 🌱 DEPTH: potted
- 💧 MOISTURE: normal
- 🌀 SOIL TYPE: clay
- 📏 PLANT HEIGHT: max 3m
- ☀️ LIGHT CONDITIONS: partial sun



Red Osier Dogwood

3



Witch Hazel

1

Compartment C

Naturalization Area

Erosion issues

- ⚖️ PH: acidic
- 🌱 DEPTH: potted
- 💧 MOISTURE: normal
- 🌾 SOIL TYPE: sandy
- 📏 PLANT HEIGHT: any
- ☀️ LIGHT CONDITIONS: full sun, partial sun



Canadian Serviceberry

2



Silky Dogwood

1



Red Osier Dogwood

3



Bush Honeysuckle

9



Smooth Wild Rose

5

Compartment D

Naturalization Area

Runoff issues

- ⚖️ PH: acidic
- 🌱 DEPTH: potted
- 💧 MOISTURE: normal
- 🌾 SOIL TYPE: sandy
- 📏 PLANT HEIGHT: any
- ☀️ LIGHT CONDITIONS: full sun, partial sun



Snowberry

3



Alternate-Leaved Dogwood

1



Nannyberry

2



Schedule B

Financial Summary

Project by: The District Municipality of Muskoka

Shoreline Re-Naturalization Starter Kit includes: free site visit, customized re-naturalization planting plan for your shoreline property, native plants including free bare root (small) and potted (large) plants and wildflowers, coconut fibre pads to deter grass from growing around new plantings, tree guards for all deciduous trees, mulch for your wildflowers, Plant Care Guide with instructions on how to take care of your new plants, Habitat Creation Guide and a Wildflower Garden Guide.

Our planting plans are created onsite with you and provide detailed information and plans to re-naturalize your shoreline property. We take photos of areas for planting and overlay native plants that are well suited to your property based on site conditions such as soil type and sunlight availability.

We will work with you to create a plan that works for you including options for low growing plants in areas where views are important.

Item	Quantity	Cost/Item	Subtotal
Starter Kit fee			\$300
Free potted plants	20	\$0	\$0
Paid potted plants	31	12.00	372.00
Free bareroot plants	0	\$0	\$0
Free wildflowers	2	\$0	\$0
Total costs			672.00



Schedule C

Project Agreement

Stewardship Agreement

Please indicate your agreement to this proposed plan by signing the following Stewardship Agreement and submitting it, along with your financial contribution, to:

The District Municipality of Muskoka

70 Pine Street Bracebridge, Ontario P1L 1N3

Plant Availability

Please note that plant species may need to be changed based on plant stock availability at the time of ordering.

Project Completion

Upon receiving your signed stewardship agreement and financial contribution, a date will be booked for you to pick up your Natural Edge Kit. The District Municipality of Muskoka will supply all plants and materials. If you are paying for the planting to be completed for you, a date will be arranged for The District Municipality of Muskoka to plant your shoreline, bringing the plants and materials with them. If there are particular dates that you would prefer, we will do our best to accommodate your requests.

The Natural Edge Stewardship Agreement with The District Municipality of Muskoka

Agreement made this _____ Day of the Month of _____ in the Year _____.

BETWEEN Cheryl Coull & John Kneale 1386 Port Cunnington Road Dwight Ontario (Hereinafter called the OWNERS)

AND **The District Municipality of Muskoka** 70 Pine Street Bracebridge, Ontario P1L 1N3 (Hereinafter called DMM)

WHEREAS the Owners and DMM have met and discussed plans for shoreline naturalization on the specified area(s) in Schedule A existing on the Owners' land;

WHEREAS the Owners indicate approval of the project as proposed; and

WHEREAS the project is, or will be for the benefit of the Owners and others;

NOW THEREFORE THE PARTIES AGREE AS FOLLOWS:

1. This Agreement shall be in effect for a period of 5 years, commencing with the date of this Agreement.
2. The Owners and DMM agree that the areas where the work is to be performed is as described in Schedule A.
3. The Owners agree to pick up their Natural Edge Starter Kit from DMM's office and plant their shoreline within two days of receipt. The Owners will provide "after" photos of the work completed to be used for reporting purposes. If the Owners wish to have the planting completed for them, then DMM or it's contractors, employees and agents will complete the planting at cost, as indicated in Schedule B.
4. If the planting is to be completed by DMM, then the Owners grant DMM, its contractors, employees and agents, the right to enter the property to perform the work agreed upon as outlined in Schedule A. In addition, DMM, its contractors, employees and agents may inspect the work performed for the purposes of monitoring the project and survival assessment, with prior agreement with Owners for date and time of inspection.
5. The Owners agree to contribute the "Landowner contribution" and pay the costs indicated in Schedule B.
6. In instances where the Owners are to pay DMM for work to be performed (outlined in Schedule A), the Owners agree to provide payments to DMM prior to the commencement of that operation. Failure of payment shall constitute a breach of this Agreement and the Owners agree that this Agreement will be terminated and thereupon the Owners agree to pay DMM the estimated costs of the operations of the project completed to date, if any.
7. The Owners agree, if necessary, to perform a reasonable amount of maintenance, which is described in the Native Plant Care Guide, available at naturaledge.watersheds.ca.
8. If a contractor is required to perform the work outlined in Schedule A, then the contractor carrying out the work on the land described will be required to take out and furnish evidence of a comprehensive policy of public liability and property damage coverage. The contractor and their workers will be required to be in good standing with the Workplace Safety and Insurance Board (WSIB) prior to performing the work.
9. The Owners agree not to remove, destroy or alter the project without prior consultation and approval of DMM. Pruning and trimming planted nursery stock, or adding replacement native nursery stock is exempt.
10. The Owners agree not to mow the planted area.
11. The Owners do acknowledge that DMM, its contractors, employees and agents, having performed said works, are not under further obligation with respect to survival of nursery stock, inspection, or maintenance.
12. The Owners, in the absence of negligence, hereby remise, release and forever discharge DMM, its contractors, employees and agents from all claims and demands for injuries, including death, loss, damages and costs in any way related to or connected with installation and maintenance of the work described or resulting from any deleterious effects of the work to the land or to the lands and buildings thereon retained by the Owners.

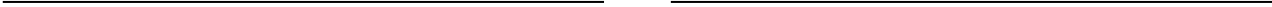
IN WITNESS WHEREOF the parties have agreed to the contents of this plan; SIGNED:

The District Municipality of Muskoka

Cheryl Coull & John Kneale

Representative Signature:

Owner Signature:





About this program

About The District Municipality of Muskoka

The District of Muskoka is an upper-tier municipality that has monitored water quality in Muskoka area lakes since 1980. Since 2002, the Muskoka Water Strategy has provided integrated and strategic initiatives for the protection of Muskoka's water resources. The purpose of the strategy is to guide and minimize the impact of human activities on water resources; ensure human and environmental health; and preserve the quality of life in Muskoka.

This program was created by Watersheds Canada

We believe that every person has the right to access clean and healthy lakes and rivers in Canada. At Watersheds Canada, we work to keep these precious places naturally clean and healthy for people and wildlife to continue using for years to come. We love working with others to meet the needs of local communities, whether you're a concerned citizen, a landowner, a lake association looking for help, or a coalition of groups interested in activating your local community.