



Compensation Planting Plan

Proposed Environmental
Resource Recovery Center
2976 Horseshoe Valley Road West
Springwater, ON

County of Simcoe





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1. Introduction

The following Compensation Planting Plan (CPP) has been prepared for the County of Simcoe (County) in fulfillment of environmental mitigation measures associated with the development of an Environmental Resource Recovery Centre (ERRC). The ERRC facility is proposed to be constructed at 2976 Horseshoe Valley Road West, in Springwater, Ontario, and will include the removal of vegetation from the Freele Tract County forest within a 5.5 hectare (ha) area proposed for the development. An Amended Scoped Environmental Impact Study (Amended EIS) was completed for the proposed ERRC facility by GHD in February 2018. The Amended EIS identified afforestation and enhancement of portions of the contiguous forested landscape as suitable mitigation for the removals required for construction of the ERRC facility, as well as transplantation of a regionally rare plant. This CPP has been prepared to fulfill these mitigation measures.

The objective of this CPP is to detail the plan for afforestation and restoration of more than 15 ha of land within the contiguous forested landscape feature the ERRC facility is to be located. As detailed within this plan, the County has identified two potential compensation sites. Both locations, Orrock Creek North Tract and the Museum Tract, are owned by the County and managed by the County's Forestry Department. A project location map is provided in Figure 1, indicating the ERRC facility and the two proposed compensation sites.

Agency and stakeholder consultation on the CPP has been extensive and will continue through the implementation of the project. Comments and recommendations have been incorporated through the development of and into the CPP to ensure appropriate mitigation and net ecological benefits will be achieved. A final Terms of Reference (TOR) and associated correspondence is provided in Appendix A.

2. Background and Objectives of the Compensation Planting Plan

2.1 Vegetation and Habitat Removal to be Mitigated

Vegetation and associated wildlife habitat will be lost during construction of the ERRC at the Freele Tract, with the loss being restricted to the proposed facility footprint, new entrance, and narrow margin along the existing access road. As documented in the Amended EIS, although the forest is managed, the facility footprint will require removal of 5.5 ha of interior mixed forest habitat that meets criteria for some categories of significant wildlife habitat (e.g., area-sensitive bird habitat, habitat for species of conservation concern). In addition, several individuals of the regionally rare false sunflower (*Heliopsis helianthoides*) are located within the access road footprint (Figure 2), and will require transplantation (Section 5.3). Detailed descriptions of vegetation and habitat to be impacted are provided in the Amended EIS.

The Amended EIS recommended a commitment to afforestation at a 2:1 ratio to expand and/or enhance the contiguous woodland feature, focusing on areas that are as close to the Site as possible (within 5 km), and in location(s) that enhance or increase the available interior forest habitat of the larger contiguous Copeland Forest feature.



2.2 Objectives of the CPP

The objectives of the CPP are to detail mitigation of the vegetation and habitat removal associated with the ERRC facility development, including both the tree/forest removals and displacement of regionally rare species. This plan outlines the ecological enhancements proposed through afforestation and forest restoration of approximately 15.7 ha within the larger contiguous forest block associated with the ERRC and surrounding area, including the planting of an estimated 20,900 trees, the removal of invasive species, and the re-establishment of additional native plants through transplantation and direct seeding. The primary objectives of the proposed activities are to increase contiguous forest habitat, enhance native species biodiversity, and provide habitat for regionally rare species.

3. Compensation Sites

The County has identified two compensation planting sites (Figure 1) within the contiguous forest landscape feature that the ERRC facility is to be located within. One of the proposed sites, the Orrock Creek North Tract, is located within 3 km of the ERRC facility site; the second, the Museum Tract, is located approximately 8.8 km from the ERRC site. While the second site is located outside of the preferred 5 km radius from the ERRC, both locations satisfy the primary objectives of increasing and enhancing interior forest habitat within the contiguous Copeland Forest unit. Both locations, Orrock Creek North Tract and the Museum Tract, are owned by the County, managed by the County's Forestry Department, and consist of large open areas and areas of patchy invasive and non-native scots pine (*Pinus sylvestris*). Planting and restoration details for each of these sites, along with conceptual maps of the planting configurations and preparation and planting details are provided in Appendix B. Together, the planting areas represent approximately 15.7 ha of ecological enhancement, comprising approximately 6.4 ha afforestation and 9.3 ha reforestation areas. This satisfies and exceeds the minimum mitigation recommendations from the Amended EIS of 5.5 ha afforestation area and 11 ha total enhancement area within the contiguous Copeland Forest unit.

4. Agency and Stakeholder Consultation

Consultation has been and will continue to be integral to the creation and implementation of a CPP that meets the objectives of stakeholders.

In conjunction with the County, GHD prepared a TOR for the CPP and Draft and Final versions were circulated to the Nottawasaga Valley Conservation Authority (NVCA), the Township of Springwater, the Ministry of Municipal Affairs and Housing (MMAH), and the Ministry of Natural Resources and Forestry (MNRF).

A meeting was held on August 13, 2018 to review the Draft TOR with attendees from Simcoe County, Township of Springwater, MNRF, MMAH, NVCA, and GHD. The meeting also included a site visit to the two proposed compensation planting sites. The TOR was then updated to reflect agency comments received after the review of the Draft TOR and proposed compensation sites. The Final TOR, inclusive of agency comments and follow-up correspondence, is provided in Appendix A. Agency staff were supportive of the proposed TOR and CPP concept and provided constructive



recommendations to ensure the mitigation objectives proposed in the Amended EIS were being met. The County circulated the Final TOR to the above-listed stakeholders and agencies on September 11, 2018. Key comments incorporated herein and included in Appendix A are those of NVCA and MNR that an ecological assessment be undertaken of each proposed compensation site. This included botanical surveys to ensure no rare plant species would be impacted by the compensation activities, and review of available ecological inventory work for the Museum Tract undertaken by others. Results of these activities are provided in Section 4.1.

A Draft CPP was circulated to all stakeholders listed above on October 5th, 2018. Comments were received by the County from NVCA on October 11, 2018 and MMAH on October 22, 2018 and have been included in Appendix C. In response to comments from NVCA, County Forestry Staff provided additional details on the proposed management approaches to unauthorized motorized use of the Orrock Tract site, which have been incorporated into Section 5.1 and Appendix B.

4.1 Ecological Assessment of Compensation Sites

Agency comments received through on-going consultation indicated that ecological assessments should be carried out to ensure no impacts to existing natural heritage values or species at risk (SAR) associated with the proposed compensation sites. In particular, habitat at the Orrock Creek North Tract was identified as potentially suitable for rare plant species such as forked three-awned grass (*Aristida basiramea*) or sand cherry (*Prunus pumilla*). A preliminary site visit was conducted on August 14, 2018 to verify the habitat and screen for rare species at both proposed compensation sites, with a focus on rare flora species. An additional site visit was carried out at the Orrock Creek North Tract on September 11, 2018 to verify the absence of any rare plant species. The vegetation survey consisted of thorough wandering (i.e., non-grid) transects within the vegetated areas and edges at each site to identify the presence of forked three-awned grass, or any other rare species. A thorough visual search for rare species of all vegetated open areas and the edges of dense woody patches was completed. The Museum Tract was also searched on September 11, 2018 to confirm the absence of rare plant species. Methodology consisted of straight transects spaced approximately 5 m apart due to the openness of the site and high visibility.

In addition, existing information available from the on-going Museum Tract and associated Kirtland's warbler restoration project east of Anne Street has been reviewed and incorporated into the CPP. This information includes botanical inventory and breeding bird survey work undertaken by Savanta and Dr. Alex Mills (Memorandum to Will Cox August 20, 2018).

4.1.1 Results

Orrock Creek North Tract

Orrock Creek North Tract is approximately 2.8 km from the ERRC site. This property is a newer acquisition to the Simcoe County Forest that was purchased in 2012 and is part of the contiguous forest landscape that surrounds the ERRC site. The Orrock Creek site is approximately 8.7 ha in size, 1.6 ha of which is an open, anthropogenic sand barren subject to high levels of motorized off trail use, while the remaining 7.1 ha consists of patchy open areas and young scots pine, with a minor component of native tree species.



Photo 1 Orrock Creek North Tract: Central anthropogenic sandy opening with evidence of motorized use and regenerating vegetation patches

Vegetation conditions at the Orrock Creek site consist of a mosaic of primarily successional woodland / plantation types and open herbaceous meadows. Some central areas of the site are entirely open and visibly free of vegetation. Dominant tree species include scots pine, with more minor components of black cherry (*Prunus serotina*), jack pine (*Pinus banksiana*), trembling aspen (*Populus tremuloides*), sugar maple (*Acer saccharum*), red pine (*Pinus resinosa*), white pine (*Pinus strobus*), and red oak (*Quercus rubra*). Sand dropseed (*Sporobolus cryptandrus*) and poverty oat grass (*Danthonia spicata*) are widespread in the ground layer; sand dropseed is successfully colonizing bare sand around the edge of the central opening. Other herb and shrub species common throughout the site include chokecherry (*Prunus virginiana*), common blackberry (*Rubus allegheniensis*), grey-stemmed goldenrod (*Solidago nemoralis*), early goldenrod (*Solidago juncea*), bouncing bet (*Saponaria officinalis*), common yarrow (*Achillea millefolium*), bracken fern (*Pteridium aquilinum*), lichens, mosses, and arrow-leaved aster (*Symphotrichum urophyllum*).

No rare species were observed.



Photo 2 Orrock Creek North Tract: View of patchy successional forest, off-road trail, and central anthropogenic sandy opening

Museum Tract

The Museum Tract is approximately 8.8 km from the ERRC Site and adjacent to the same contiguous forested landscape as the ERRC and Orrock Creek North Tract. This site is 7 ha in size, 4.8 ha of which is open anthropogenic sand/gravel barrens with the remaining 2.2 ha is dominated by scattered scots pine and some small openings. This site was a former Canadian Pacific (CP) Rail aggregate pit and partially used as a compost staging area by Solid Waste Management. Adjacent (east) to this site is an active 42 ha habitat creation and forest restoration project currently being undertaken by the County and funding partners.



Photo 3 Museum Tract: Disturbed, gravelly substrate with sparse vegetation and mosses

Vegetation communities at the Museum Tract (west of Anne Street and a small portion east of Anne Street) consist of a large, early-successional meadow with exposed sand and gravel substrate and patchy mixed woodland around the edge. Species composition is similar but less diverse than at the Orrock Creek site. Sand dropseed and knapweed (*Centaurea* sp) are the dominant species in the ground layer; other abundant herb species include common yarrow (*Achillea millefolium*), white sweet clover (*Melilotus albus*), and mosses and lichens. The far west edge of the open meadow area contains a large patch of indian grass (*Sorghastrum nutans*), with lesser components of big bluestem (*Andropogon gerardii*).

No rare species were observed.



Photo 4 Museum Tract: Patch of indian grass (*Sorghastrum nutans*) at the western end of the open gravel area

Wildlife

Eastern whip-poor-will (*Antrostomus vociferous*) observations have been recorded in the southern portions of the Museum Tract (Figure 3) by Dr. Mills, including near the southern edge of the proposed compensation site. Based on review of the documentation provided to the County, it is our understanding that the activity was a male broadcasting its territory when called and no females or nesting activity were confirmed within the compensation plan planting area. County Forestry staff have also received affirmation from Dr. Mills that the proposed planting activities on the Museum Tract lands (both east and west of Anne Street) pose no concern to whip-poor-will and are of a long term benefit to the species.

Based on consultation between the County and MNR, MNR has indicated they are supportive of the Kirtland's warbler project on lands east of Anne Street and no impacts to whip-poor-will are anticipated with adherence to specified timing windows. A conservative window of no works between May 1 and September 15 was initially provided for the area east of Anne Street. MNR noted the fall date of September 15 was a conservative estimate and flexibility would be possible due to site specific information. Further discussion with MNR and Dr. Mills agreed activities could commence September 5 without posing a concern to the species. Compensation activities at the proposed CPP Museum Tract site will adhere to these specified timing windows. In addition to timing restrictions, further mitigation measures are recommended in order to ensure that habitat remains suitable for existing SAR that may be using the area.



A key component will be to ensure that canopy openings will be maintained in the existing wooded areas. Densely forested areas with closed canopies may be avoided by eastern whip-poor-will, and areas with extensive forest underbrush are avoided. Maintaining canopy openings and retaining a suitable understory can be achieved by focusing on invasive species removal as the primary restoration/ enhancement activity in existing wooded areas. Furthermore, canopy openings will be provided for in the planting configuration for the afforestation areas.

5. Compensation Details

5.1 Forestry Site 1: Orrock Creek North Tract

The compensation planting at the Orrock Creek North Tract will include a combination of afforestation, forest restoration, and groundcover restoration, with the planting of an estimated 9,500 trees. Afforestation will seek to establish native forest cover in a large open area (1.6 ha). Forest restoration will include the removal of invasive species (predominantly scots pine) and the underplanting of native trees (7.1 ha), while groundcover restoration will entail establishing a highly diverse mix of native herb and shrub species where groundcover is not present. Ongoing management of scots pine due to a large seedbank will likely be required. Specific and ongoing efforts to manage site impacts from the existing unauthorized motorized uses will also be required as detailed in Appendix B. A number of initial actions are recommended, including trail re-alignment, installation of fencing/barriers, OPP enforcement, and communication with local users and recreational groups. Ongoing effectiveness of the measures and additional requirements will be adaptively managed through ongoing County By-law Officer monitoring and enforcement actions in the area.

The afforestation of this site will fill in a large anthropogenic gap and increase the amount of contiguous interior forest habitat in this forest patch. Furthermore, removal of invasive species and enhancement of the native groundcover will significantly enhance local biodiversity and forest structure in this location, as well as help limit/manage the spread of invasive species to the larger forest.

5.2 Forestry Site 2: Museum Tract

The compensation planting at Site 2 will include a combination of afforestation, habitat creation, forest restoration, and groundcover restoration, with the planting of an estimated 11,400 trees. Afforestation will aim to establish native forest cover in large open areas (4.8 ha). A landscape mosaic will be created across the compensation site and adjacent Kirtland's warbler (*Setophaga kirtlandii*) site consisting primarily of scattered untreed areas, jack pine forest, and mixed plantings. Forest restoration will include the removal of invasive species (predominantly scots pine) and the underplanting of native trees (2.2 ha), while groundcover restoration will entail establishing a mix of native herb and shrub species where groundcover is not present. On-going management of scots pine due to a large seedbank will likely be required.

Afforestation in this location will contribute significantly increase the overall size (4.8 ha) of the contiguous forest landscape patch. In addition, the afforestation at this location significantly increases available habitat for the endangered Kirtland's warbler as part of the ongoing project on



adjacent (east of Anne Street) lands, thus providing a large ecological benefit. Native tree and groundcover restoration, and removal of invasive species, will also increase local biodiversity and reduce the spread of invasive species.

5.3 Transplantation of Regionally Rare Species

Regionally rare false sunflower (*Heliopsis helianthoides*) was identified in the Amended EIS as a candidate species for transplantation as a mitigation measure associated with the ERRC Site development. Existing false sunflower locations were identified and surveyed in the field (Figure 2) on August 14 and 15, 2018. A total of 20 stems were located in two small clusters within the proposed access road footprint.

Proposed transplantation areas have been identified within the Orrock Creek North Tract (Figure 4), near the forestry compensation site. The proposed transplant areas provide suitable open habitat (e.g., meadow, canopy openings in areas that are not too dry or sandy) in conditions similar to the species' existing location at the Freele Tract. Should either of these locations be deemed to be unsuitable based on field conditions observed in spring of 2019, numerous additional suitable open areas exist within the Tract, which can be considered.

Appropriate transplantation methods will be used and include the following:

- Sunflowers should be dug and transplanted on the same day.
- Sunflowers will be hand dug carefully from their existing locations preserving a minimum of 12 inches in diameter of the surrounding soil and to a sufficient depth to preserve the majority of visible roots, but no less than 8 inches. Clusters of plants should be removed as one clump and transplanted as one unit. Preserving native soil and existing clumps will help minimize root disturbance and ensure suitable growing medium at the transplant location.
- Soil at the transplant site will be cleared of weeds and rocks and loosened to avoid planting into compacted conditions.
- Hand dug holes for transplanting at the transplant sites will be twice as large as the root balls of transplanted plants and backfilled appropriately.
- Plants will be thoroughly watered until soil is saturated. If droughty conditions are present around the time of planting, repeat watering may be required.
- Mulching is recommended to reduce weed competition and help with moisture retention prior to re-establishment. Mulch should be placed on disturbed soil at a depth of 2 inches and no closer than 3 inches to the stems.
- The use of natural soil amendments (e.g., bone meal, micorrhizal applications) may be warranted based on site conditions at the time of transplantation. No fertilizers should be applied.



6. Proposed Monitoring

6.1 Compensation Sites

Monitoring to ensure the success of the compensation sites will include end of growing season survival assessments in year 1, 2, and 5. A sample of seedlings will be assessed and replanting will occur if survival falls below 70%. Additional yearly assessments may be warranted if deficiencies are noted. Monitoring will be carried out by County Forestry staff trained and familiar with the monitoring protocols.

6.2 False Sunflower Transplantation Sites

To ensure proper establishment, frequent monitoring is recommended through 2018 post-transplantation. Bi-weekly visits in 2018 from May to October to monitor growing conditions (or more frequently during drought conditions) may be required to check for disturbance or signs of stress until the plants are well-established.

Monitoring will be conducted twice a year in 2020 to ensure continued survival and seed production to ensure successful establishment. The first visit should occur in mid-summer (mid-July to early August) and again in September. Specific timing of visits should be planned to coincide with the flowering and fruiting period which may vary somewhat from year to year.

If >50 percent of transplants are not successful, a local seed source will be located and supplemental seeding will be carried out at the transplant site(s).

7. Schedule

The schedule of works at the two compensation sites and the false sunflower transplantation site are outlined in Table 1.

Table 1 Schedule of Compensation Planting Works

Task	Orrock Creek North Tract	Museum Tract
Site Preparation	Fall 2018 – removal of Scot’s pine, level extreme topography (off road motorized vehicle jumps), restrict unauthorized access	Fall 2018 – removal of Scot’s pine, plow level areas to prepare seedbed, remove garbage
Tree Planting	Spring 2019 – plant 9,500 trees	Spring 2019 – plant 11,400 trees
Seeding	Spring 2019 – sow seed mixture (see appendix for details)	Spring 2019 – sow seed mixture (see appendix for details)
False Sunflower Transplantation	Summer 2018 – Record the detailed location of the plants to be transplanted. Transplanting to occur in Spring 2019 (prior to last freeze but after ground has thawed).	N/A



Table 1 Schedule of Compensation Planting Works

Task	Orrock Creek North Tract	Museum Tract
Monitoring	See appendix for details. With regards to the False Sunflower Transplantation: Bi-weekly in 2019 growing season until plants are established. Twice yearly in 2020 to verify continued flower/fruit production.	See appendix for details

8. Conclusion

The CPP provided herein provides suitable mitigation for the tree removals and vegetation disturbance associated with the development of the ERRC by means of afforestation and enhancement of the larger contiguous forest. This is achieved through a greater than 2:1 compensation effort including an increase in contiguous forest habitat, enhancement of native species biodiversity, and provision of habitat for regionally rare species.

All of Which is Respectfully Submitted,

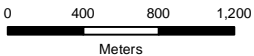
GHD

Nicole Charlton, B.A., ISA Arborist, M.Sc. (Candidate)

Laura Lawlor, M.Sc., C.E.



Source: MNRF NRVIS, 2018. Produced by GHD under licence from Ontario Ministry of Natural Resources and Forestry, © Queen's Printer 2018. Image ©2018 Google, Imagery date: 6/19/2015



Coordinate System:
NAD 1983 UTM Zone 17N

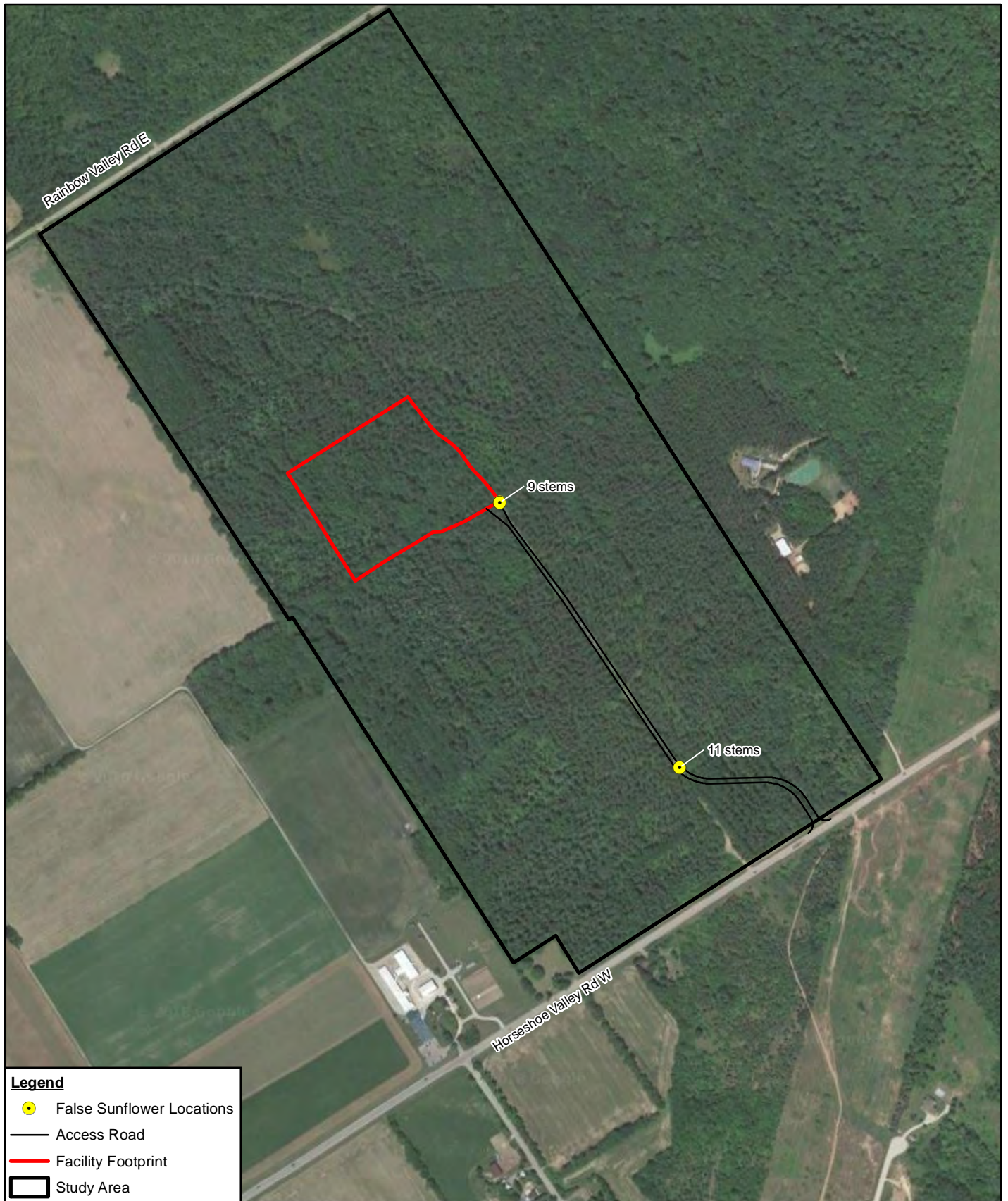


ENVIRONMENTAL RESOURCE RECOVERY CENTRE
SPRINGWATER, ONTARIO
COMPENSATION PLANTING PLAN

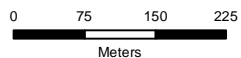
086822
Sep 24, 2018

PROJECT LOCATION

FIGURE 1



Source: MNRF NRVIS, 2018. Produced by GHD under licence from Ontario Ministry of Natural Resources and Forestry, © Queen's Printer 2018. Image ©2018 Google, Imagery date: 6/19/2015



Coordinate System:
NAD 1983 UTM Zone 17N



ENVIRONMENTAL RESOURCE RECOVERY CENTRE
SPRINGWATER, ONTARIO
COMPENSATION PLANTING PLAN


086822
Sep 28, 2018

FALSE SUNFLOWER LOCATIONS
AT ERRC SITE

FIGURE 2

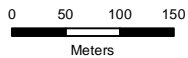


Legend

 Approximate Location of Whip-poor-will Observations

*Observation data provided to County by Dr Alex Mills

Source: MNRF NRVIS, 2018. Produced by GHD under licence from Ontario Ministry of Natural Resources and Forestry, © Queen's Printer 2018. Image ©2018 Google, Imagery date: 6/19/2015



Coordinate System:
NAD 1983 UTM Zone 17N



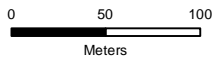
ENVIRONMENTAL RESOURCE RECOVERY CENTRE | 086822
 SPRINGWATER, ONTARIO | Oct 3, 2018
 COMPENSATION PLANTING PLAN

WHIP-POOR-WILL OBSERVATIONS
 AT MUSEUM TRACT

FIGURE 3



Source: MNRF NRVIS, 2018. Produced by GHD under licence from Ontario Ministry of Natural Resources and Forestry, © Queen's Printer 2018. Image ©2018 Google, Imagery date: 6/19/2015



Coordinate System:
NAD 1983 UTM Zone 17N



ENVIRONMENTAL RESOURCE RECOVERY CENTRE | 086822
 SPRINGWATER, ONTARIO | Oct 3, 2018
 COMPENSATION PLANTING PLAN
 FALSE SUNFLOWER POTENTIAL
 TRANSPLANT AREAS AT
 ORROCK CREEK NORTH TRACT

FIGURE 4

Appendices

Appendix A

Final Terms of Reference



Memorandum

September 10, 2018

To: Stephanie Mack, P.Eng. Ref. No.: 086822

From: Laura Lawlor/aj/11 Tel: 519-340-3759

cc: Brian Dermody (GHD)
Blair Shoniker (GHD)

**Subject: Environmental Resource Recovery Centre
2976 Horseshoe Valley Road West, Springwater, ON
Compensation Planting Plan Terms of Reference**

The following has been prepared for the purpose of outlining the Terms of Reference for the preparation of a Compensation Planting Plan (CPP) for the County of Simcoe (County) in fulfillment of environmental mitigation measures associated with the development of an Environmental Resource Recovery Centre (ERRC). The ERRC facility is proposed to be constructed at 2976 Horseshoe Valley Road West, in Springwater, Ontario (Site), and will include the removal of vegetation from the Freele Tract County forest within a 5.5 hectare (ha) area proposed for the development. The Freele Tract is one of many County managed forests that are part of a larger contiguous forest landscape feature.

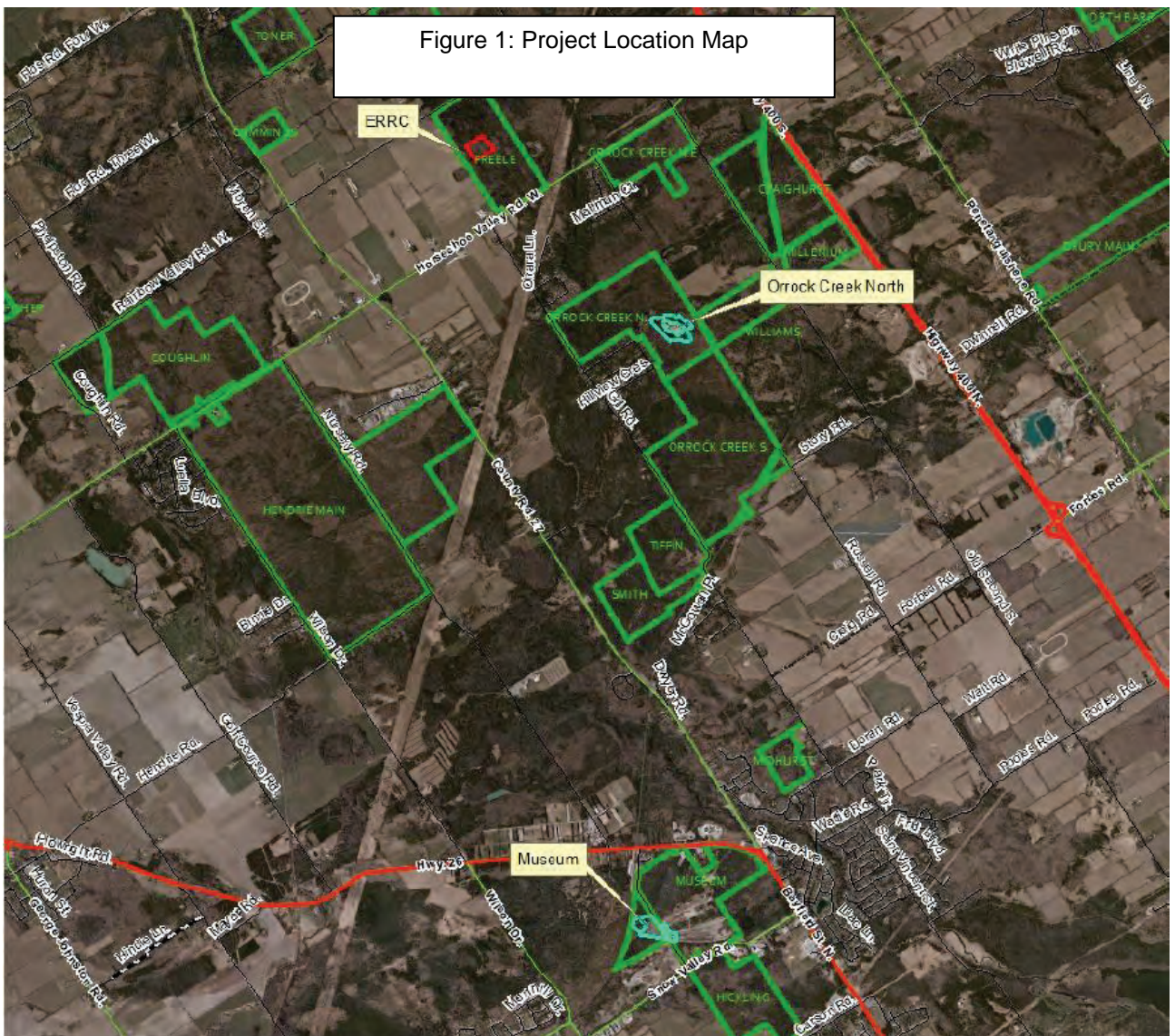
An Amended Scoped Environmental Impact Study (EIS) was completed for the proposed ERRC facility by GHD in February 2018. The EIS identified the development and implementation of a CPP as suitable mitigation for the impacts to vegetation and habitats associated with the removal of vegetation for the development of the proposed ERRC facility. These recommendations include afforestation of at least 11 ha within the County (ideally within 5 kilometers (km) of the Site), which should occur in advance of tree removals from the Site.

1. Objectives of the CPP

The objectives of the CPP are to detail mitigation of the vegetation removal associated with the ERRC facility development, including both the tree removals and displacement of regionally rare species. The plan will outline the ecological enhancements proposed through afforestation and forest restoration of approximately 15.6 ha within the larger contiguous forest block associated with the ERRC and surrounding area, including the planting of an estimated 18,400 trees, the removal of invasive species and the re-establishment of additional native plants through direct seeding. Works on the CPP will be undertaken in consultation with the County's Forestry team who will provide background on the proposed compensation sites, details on the plantings and restoration work, and some details on the environmental/ecological benefits of these projects. The technical details of planting composition will be prepared by County foresters, and reviewed by GHD for suitable replacement of the vegetation and habitat scheduled for removal within the ERRC facility footprint.

2. Compensation Plan Details

The County has identified two potential compensation tree planting sites within the contiguous forest landscape feature that the ERRC facility is to be located within. Both locations, Orrock Creek North Tract and the Museum Tract, are owned by the County and managed by the County's Forestry Department, and consist of large open areas and areas of patchy invasive and non-native Scots Pine (*Pinus sylvestris*). Together, the proposed planting areas represent approximately 15.6 ha of ecological enhancement, comprising approximately 6.3 ha afforestation and 9.3 ha reforestation areas. This total enhancement area of approximately 15.6 ha satisfies and exceeds the minimum 11 ha recommended for mitigation of removals associated with the ERRC Site (Figure 1).





2.1 Forestry Site 1: Orrock Creek North Tract

Site 1 (Orrock Creek North Tract) is approximately 2.8 km from the ERRC site. This property is a newer acquisition to the Simcoe County Forest that was purchased in 2012 and is part of the contiguous forest landscape that surrounds the ERRC location (Figure 2). The site is approximately 8.7 ha in size, 1.6 ha of which is an open, anthropogenic sand barren subject to high levels of motorized off-trail use, while the remaining 7.1 ha consists of patchy open areas and young Scots Pine, with a minor component of native tree species. The afforestation and restoration of this site will significantly increase interior forest habitat.

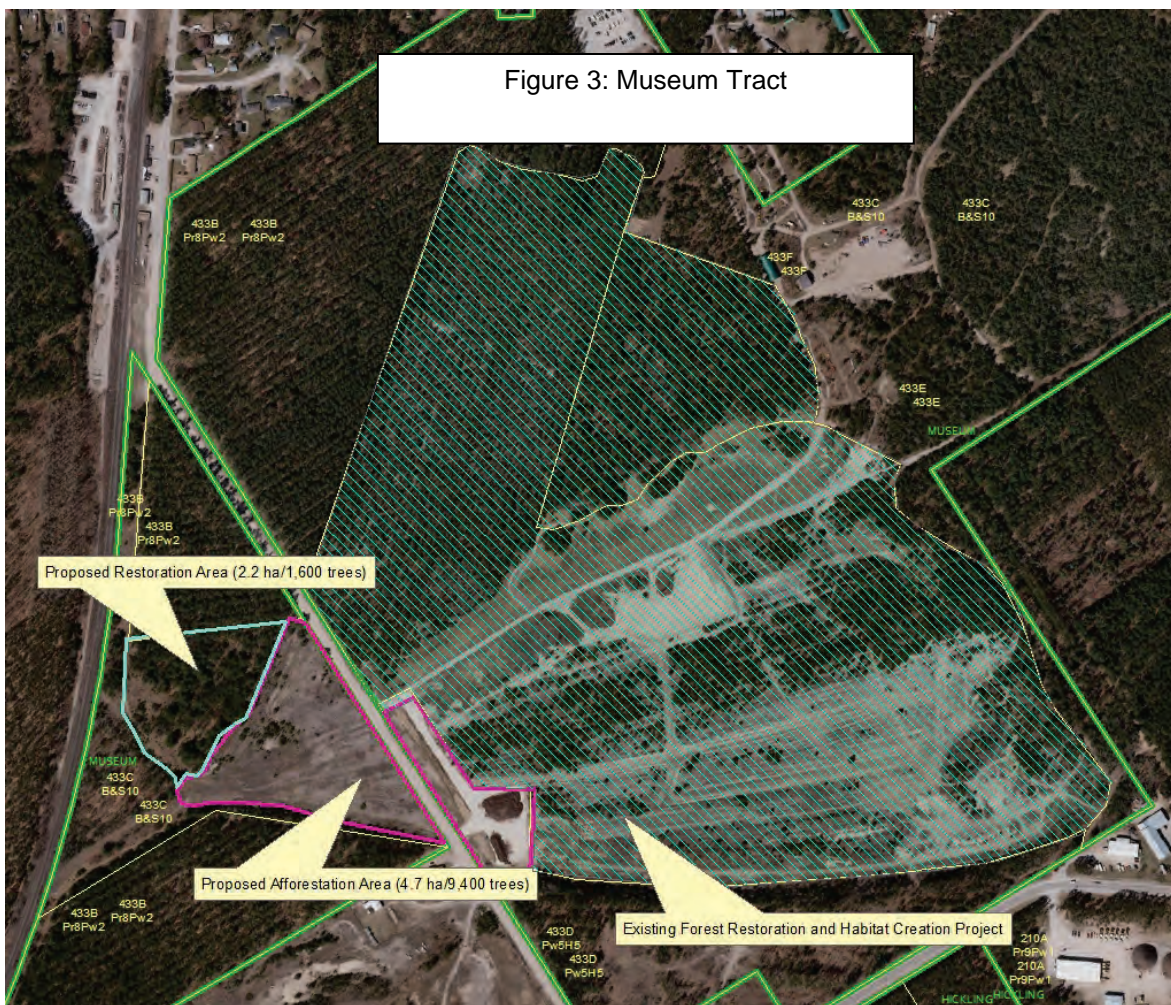
The proposed compensation planting at the Orrock Creek North Tract will include a combination of afforestation, forest restoration, and groundcover restoration. Afforestation will seek to establish native forest cover in large open area (1.6 ha) by planting approximately 3,200 trees. Forest restoration will include the removal of invasive species (predominantly Scots Pine) and the underplanting of 4,200 native trees (7.1 ha), while groundcover restoration will entail establishing a mix of native herb and shrub species where groundcover is not present.



2.2 Forestry Site 2: Museum Tract

Site 2 (Museum Tract) is approximately 8.8 km from the ERRC Site and adjacent to the same contiguous forested landscape as the ERRC and Site 1. Site 2 is 6.9 ha in size, 4.7 ha of which is open sand/gravel barrens with the remaining 2.2 ha is dominated by scattered Scots Pine and some small openings (Figure 3). This site was a former Canadian Pacific (CP) Rail aggregate pit and partially used as a compost staging area by Solid Waste Management. Adjacent to this site is an active 42 ha habitat creation and forest restoration project currently being undertaken by the County and funding partners.

The proposed compensation planting at Site 2 will include a combination of afforestation, habitat creation, forest restoration, and groundcover restoration. Afforestation will aim to establish native forest cover in large open areas (4.7 ha) by planting an estimated 9,400 trees. Habitat for endangered, threatened, and species of concern will be expanded and created by following the guidelines developed for the adjacent habitat creation and forest restoration project. Forest restoration will include the removal of invasive species (predominantly Scots Pine) and the underplanting of 1,600 native trees (2.2 ha), while groundcover restoration will entail establishing a mix of native herb and shrub species where groundcover is not present.





2.3 Transplantation

Regionally rare oxeye sunflower (*Heliopsis helianthoides*) was identified in the Amended EIS as a candidate species for transplantation as a mitigation measure associated with the ERRC Site development. The transplantation locations within the Freele Tract property will be identified, along with any potential locations on the forestry sites.

2.4 Ecological Assessment of Proposed Compensation Sites

Agency comments as part of on-going consultation indicated that ecological assessments should be carried out to ensure no impacts to natural heritage values or species at risk. Habitat at the Orrock Creek North Tract may be suitable for rare plant species such as forked three-awned grass (*Aristida basiramea*) or sand cherry (*Prunus pumilla*). A preliminary Site visit was conducted on August 14, 2018 to verify the habitat and screen for rare species at both proposed compensation sites, with a focus on rare flora species. An additional site visit will be carried out at the Orrock Creek North Tract the week of September 10, 2018 to verify the absence of any rare plant species.

In addition, existing information available from the on-going Museum Tract and associated Kirtland's warbler restoration project east of Anne Street is being reviewed and will be incorporated where relevant into the CPP. This information includes botanical inventory and breeding bird survey work undertaken by Savanta and Dr. Alex Mills (Memorandum to Will Cox August 20, 2018). Of note, whip-poor-will observations have been recorded in the lands surrounding the Museum Tract (Figure 4) by Dr. Mills, including near the western edge of the proposed compensation site. It is our understanding based on review of available information that the activity was a male broadcasting its territory when called and no females or nesting activity were confirmed in that location. County forestry staff have also received affirmation from Dr. Mills the proposed planting activities on the Museum Tract lands (both east and west of Anne Street) pose no concern to whip-poor-will.

Based on consultation between the County and MNRF, MNRF has indicated they are supportive of the on-going Kirtland's warbler project on lands east of Anne Street and no impacts to whip-poor-will are anticipated with adherence to specified timing windows. A conservative window of no works between May 1 and September 15 has been provided; MNRF and the County are in discussions on the final agreed upon late season date.

Compensation activities at the proposed CPP Museum Tract Site will adhere to these MNRF-specified timing windows as well as any other recommended mitigation measures such as maintaining canopy openings in existing wooded areas and focusing on invasive species removal, and providing canopy openings in afforestation areas. Such measures will be outlined in further detail in the draft CPP.



3. Reporting

Building upon the *Forest Compensation Plan* prepared by the County's Forestry Department, GHD will prepare a CPP that satisfies the vegetation removal mitigation components of the EIS and follows forestry good-practices. This will include:

- Objectives of the compensation planting program; concordance with mitigation measures from the Amended EIS (e.g. ecological enhancement that includes both afforestation and forest restoration, proximity to the Site)
- Identification of the vegetation and habitat being compensated for as part of the ERRC facility development
- Details of the afforestation, forest restoration and groundcover restoration sites (location, size, species, soil conditions, habitat creation)



- Ecological assessment results of each compensation site and any mitigation measures to ensure no impacts to rare species or other natural heritage values result from compensation activities
- Details of the extent of the existing oxeye sunflower to be transplanted, identification of transplant locations
- Schedule of compensation planting works (soil preparation, plantings, transplantings, vegetation removal from the ERRC facility footprint)
- Monitoring methods and schedule

GHD will prepare a draft CPP in accordance with this TOR, which will be circulated to the agencies and stakeholders for review and comment. The final CPP will be circulated in October 2018 for reference during implementation of the CPP.

The CPP will be prepared as an independent document to allow for timely consultation with agencies and stakeholders. The CPP will eventually be provided as an appendix to the Environmental Management Plan (EMP) for the ERRC.

4. Consultation

Agencies to be consulted in development of the CPP include the Nottawasaga Valley Conservation Authority (NVCA), the Ministry of Municipal Affairs and Housing (MMAH), and the MNRF. Stakeholders to be consulted in the development of the CPP include County staff (e.g., Solid Waste Management, Forestry, Planning) and the Township of Springwater. Consultation has been on-going and will continue to take place through a variety of means during the development of the CPP including:

- Agency and stakeholder review of the draft TOR
 - A meeting was held on August 13, 2018 to review the Draft TOR with attendees from Simcoe County, Township of Springwater, MNRF, MMAH, NVCA, and GHD. Meeting minutes and follow-up correspondence are appended as Attachment A. This document has been updated to reflect comments received thus far and will be carried forward to the CPP as relevant. Agency staff indicated their support for the proposed TOR and CPP concept.
- Site visit to the two proposed compensation planting sites
 - A Site visit was held on August 13, 2018 to review the proposed sites with attendees from Simcoe County, Township of Springwater, MNRF, MMAH, NVCA, and GHD. Agency comments reflective of information gained at the Site visit are incorporated into Attachment A, this document, and will be addressed in the CPP as relevant.
- Distribution of final CPP TOR to agencies and stakeholders
- Agency and stakeholder review of the draft CPP

Attachment A

Solid Waste Management – Environmental Resource Recovery Centre (ERRC) Compensation Planting Plan

MINUTES

AUGUST 13, 2018

1:00 PM – 4:00 PM

MIDLAND PENETANGUISHENE
BOARDROOM, SITE TOUR

MEETING CALLED BY	County of Simcoe – Project Team
TYPE OF MEETING	Discussion of Terms of Reference, Site Tour
NOTE TAKER	Stephanie Mack
ATTENDEES	<p>Rob McCullough – Director, Solid Waste Management Stephanie Mack – Special Projects Supervisor, Solid Waste Management</p> <p>Laura Lawlor – Associate – Environmental Scientist and Ecologist, GHD Nicole Charlton – Senior Terrestrial Ecologist, GHD Graeme Davis – County Forester Will Cox – Forestry Technician II – Invasive Species</p> <p>Nathan Westendorp – County – Planning Chris Russell – Township of Springwater – Planning Lee Bull – Nottawasaga Valley Conservation Authority Mike Francis – Nottawasaga Valley Conservation Authority Aldo Ingraldi – Ministry of Municipal Affairs and Housing Brent Shirley – Ministry of Natural Resources and Forestry Emily McLeod – Ministry of Natural Resources and Forestry</p>
DOCUMENTS CIRCULATED	Memorandum from GHD Limited dated August 9, 2018 – Compensation Planting Plan Terms of Reference, Draft for Review

Agenda topics

WELCOME AND INTRODUCTIONS

RM

DISCUSSION	<ul style="list-style-type: none"> • welcome • ERRC update and next steps • round table introduction
	<ul style="list-style-type: none"> • Rob McCullough (RM) opened the meeting and provided a brief description of the ERRC project – function of the MMF and OPF, siting process undertaken, and project status • County Council adopted County OPA No. 2 on June 26, 2018, now with MMAH for their consideration • proceeding with time-sensitive work related to compensation – although the local OPA and ZBA are still in the planning process • apologized for the accelerated timeline but noted that work related to compensation must precede any site works – spring planting will require decisions and direction from agencies/stakeholders now • relayed that although work on compensation is just being initiated for this project, it is not uncommon for County Forestry and SWM to work together – currently working on planting other closed SWM sites, County Forestry team do this type of work regularly • introduced Laura from GHD – ecologist

AMENDED EIS, COMPENSATION PLANTING PLAN

GHD – LL

DISCUSSION	<ul style="list-style-type: none"> • brief EIS overview • proposed mitigation strategies/compensation • objectives of Compensation Planting Plan
	<ul style="list-style-type: none"> • Laura Lawlor (LL) from GHD provided a description of the proposed ERRC site located at 2976 Horseshoe Valley Road West, Springwater • details on the various components studied in the EIS (wetlands, SAR, amphibians/bats, vegetation, etc.), described natural features of the site, distance of footprint to wetland feature • mitigation will comprise two components – minimizing habitat loss by target replacement and enhancement of interior forest habitat, minimizing vegetation removals • outlined some operational mitigation measures to minimize damage to wildlife and habitat, noted recommendation that vegetation removal be undertaken outside of breeding bird and bat roosting season (i.e. September to February) • in regard to vegetation communities, site preparation will be undertaken in the fall season, County to proceed with compensation efforts to improve contiguous woodland area <i>prior to ERRC site preparation</i> – this is the purpose of this meeting today and associated timing

AMENDED EIS, COMPENSATION PLANTING PLAN *CONTINUED*

- EIS also outlines mitigation related to the transplantation of the Oxeye Sunflower – a regionally rare species
- note that 3 mitigation plans will be prepared as per the EIS – Environmental Protection Plan, Wildlife Habitat Mitigation Plan, Compensation Planting Plan (CPP)
- LL detailed the objectives of the CPP – details regarding ecological enhancement – increase interior forest habitat, expand potential SAR habitat, removal of invasive species (Scots Pine)
- key discussion that will require feedback – afforestation versus reforestation, distance of the compensation site(s) from the ERRC facility (>5 km) but the overall intention of mitigation to improve ecological function of the contiguous forest

PROPOSED COMPENSATION SITES, TIMING

COUNTY FORESTRY – GD, WC

DISCUSSION	<ul style="list-style-type: none"> • overview of two proposed sites • plan for afforestation/reforestation • timeline
<ul style="list-style-type: none"> • Graeme Davis (GD) provided an overview of County Forestry work – tree planting and forestry management practices, expertise of the team • description and overview of Compensation Site 1 – Orrock Creek North Tract (2.8 km from ERRC site) and Compensation Site 2 – Museum Tract (8.8 km from ERRC site) • both sites are owned by the County, have both open areas and areas with patchy invasive species (Scots Pine) • proposed compensation plan for the ERRC project includes 15.6 of afforestation and reforestation, approximately 18,000 trees to be planted • Orrock Creek North Tract would require control of motorized vehicles through this area, stopping usage of the site for gatherings, etc. • preparation required this fall to support spring planting – removal of the invasive species, tilling, securing trees • species would include mostly coniferous plantings (Jack Pine, Red Pine, White Pine, etc.), Museum site will also include additional seeding of native groundcover with many shrub grass and herb species • ecological/environmental benefit – Orrock Creek North would restore a “hole” within a large block of interior forest, reduce/eliminate spreading of invasive species, Museum would complement an existing restoration project (Kirtland’s Warbler project) • Will Cox (WC) – provided information on current restoration work at the Museum Tract – 42 ha of habitat creation, ERRC compensation site would be in addition to this and provide additional habitat in an area formerly used by SWM for compost giveaway • note that the Kirtland’s project alone will contribute significant afforestation (~20 ha) to the contiguous forest – but County proposing these two additional compensation sites to further show a commitment to ecological enhancement in this area • RM – timing – seeking feedback on the draft Terms of Reference (TOR) by next week (August 22, 2018) • RM explained the need to keep moving forward on this – spring planting requires a commitment now, need agency/stakeholder feedback on this plan to move forward • following circulation of the final TOR, work will be undertaken and the draft CPP circulated (October 10, 2018 deadline for comments) • appreciate the attendance at this meeting, input and feedback on this plan 	

DISCUSSION AND QUESTIONS

GROUP

<ul style="list-style-type: none"> • How many trees are being taken out of the Freele Tract? <ul style="list-style-type: none"> → County/GHD – number of trees is challenging to assess – provide information by area/density → 4.5 ha for the footprint, 1 ha to provide site access – typically 4.5 ha would be approximately 9,000 trees, replanting would be a similar density on a 2:1 area • Has the Orrock Creek North open area been assessed? Is the open area properly characterized by the term “open sand barren”? <ul style="list-style-type: none"> → acknowledged by County/GHD, note that this was discussed further on site tour, and supplementary survey added to “Action Items” → as discussed more fully on the site tour, perhaps better termed “anthropogenic (human influenced) sand barren area” → note that studies/surveys on existing conditions have been conducted at the Museum Tract for the restoration project, will utilize this information in the CPP • Is there existing access to the Orrock Creek North site? <ul style="list-style-type: none"> → County – yes, through Williams Tract off of Old Second South • RM – note that County Forestry continues to add property based on opportunity, need, etc.

DISCUSSION AND QUESTIONS *CONTINUED*

- Comment on the 5 km distance from the ERRC site for compensation site outlined in the EIS?
 - GHD – yes, this was a guideline but need to look at the contiguous forest feature, ecological benefits of existing projects, etc., the Museum site provides benefit to the current restoration project
 - seeking feedback from agencies that the CPP considers adequate ecological enhancement – big picture
 - acknowledged by group that the forest complex in this area is generally full – presents difficulties in sourcing viable afforestation lands within the 5 km radius from the ERRC site, very difficult to achieve without impinging on productive farmland
- Will there be opportunity for education, trails, etc. at the Museum site?
 - County – there will be trails, large education component at the east portion of the Museum site
- Opportunity for public input on this?
 - County – cautiously moving forward respecting that the land use planning process is on-going at the local level, getting the various agencies and technical experts feedback on the CPP at this point is a major component on moving forward with this plan
- Feedback from the biological/ecological experts – does this plan bring ecological enhancement?
 - MNRF – further vegetation assessment required at the Orrock Creek North site, NVCA – need to consider existing site **conditions (i.e. “open sand barren”) at this site to characterize the feature**
 - County – may require modification to the planting plan based on further assessment but area will benefit from removal of invasive species as part of the compensation plan
 - discussion – **compensation does not necessarily have to be “forest for forest” but look at the overall enhancement the work brings, Kirtland’s Warbler area, for example, brings numerous other ecological benefits**
- What other work is required for the Orrock Creek North site?
 - County – given the current use at the site, a communication plan with the neighbours, realignment of the snowmobile trail, signage, fencing, etc. will be required
- RM (for discussion) – should note that the Freele Tract was scheduled for harvesting
- Long term monitoring?
 - GHD – CPP will outline a plan for long term monitoring
- Why was the footprint for the ERRC facility put in the center of the property?
 - County/GHD – location of the footprint was based on numerous factors such as groundwater conditions, soil class, archeological feature, input from neighbouring landowners
- discussion – CPP in consideration of plantation on the ERRC footprint, positive response to proposal, plan appears sound

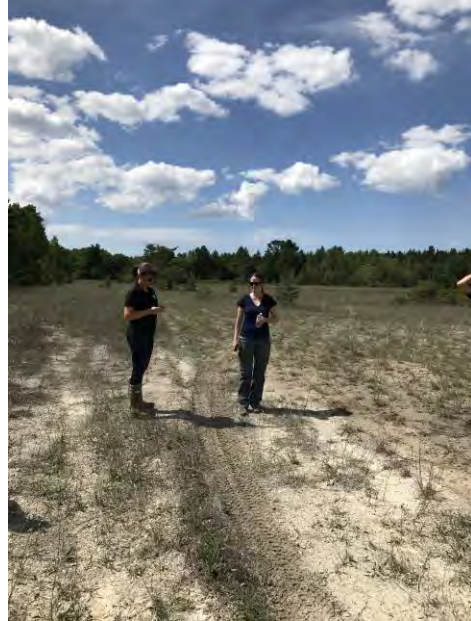
ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
<ul style="list-style-type: none"> • further assess open area at Orrock Creek North Tract, details to be provided in the CPP (i.e. existing site conditions) 	GHD	with CPP draft
<ul style="list-style-type: none"> • outline a long term monitoring plan within the CPP 	GHD/County Forestry	with CPP draft

CLOSING REMARKS

RM, COUNTY FORESTRY

DISCUSSION	
	<ul style="list-style-type: none"> • next steps • tour details
	<ul style="list-style-type: none"> • RM relayed Project Team’s appreciation for attendance, input, and consideration to the CPP • next steps – seeking comments on draft TOR by Wednesday, August 22

DESCRIPTION	<ul style="list-style-type: none">• visit to Museum Tract, Orrock Creek North Tract
-------------	---------------------------------------------------------------------------------------------------



Compensation Site 2 – Museum Tract



Compensation Site 1 – Orrock Creek North Tract

From: Mack, Stephanie
To: [Laura Lawlor](#); [Nicole Charlton](#); [Davis, Graeme](#); [Cox, William](#)
Cc: [Brian Dermody](#); [McCullough, Rob](#); [Westendorp, Nathan](#)
Subject: FW: NVCA Comments - ERRC Compensation Planting Plan Terms of Reference, NVCA ID # 30106
Date: Tuesday, August 21, 2018 9:51:44 AM

From: Lee Bull [<mailto:lbull@nvca.on.ca>]
Sent: Tuesday, August 21, 2018 8:59 AM
To: Mack, Stephanie <Stephanie.Mack@simcoe.ca>
Cc: Westendorp, Nathan <Nathan.Westendorp@simcoe.ca>
Subject: NVCA Comments - ERRC Compensation Planting Plan Terms of Reference, NVCA ID # 30106

Good morning Stephanie

Thank you for the opportunity to provide further comments on the Terms of Reference for the proposed Compensation Planting Plan for the ERRC. In response we offer the following for your consideration:

Museum Tract:

- NVCA staff are of the opinion that the proposed works at the Museum Tract represent an excellent opportunity to tie into existing habitat creation efforts for Kirtland's Warbler. It is assumed that the created habitat areas will be monitored for potential activity by the target species. We encourage the County to consider long-term adaptive measures to ensure continued habitat suitability for the target species, e.g. rotational burning.

Orrock Creek:

- As discussed, it is recommended that future reporting of the Orrock Creek site avoid the term "Open Sand Barren", which refers to a provincially-rare plant community. Given the vegetation conditions of the site and ongoing disturbance by off-road vehicle activity, NVCA staff do not feel that this community represents a natural sand barren. Therefore, it may be advisable to use a term such as "Anthropogenic Sand Barren" in future reporting.
- Notwithstanding the above comment, NVCA staff recommend a vegetation assessment of the Orrock Creek site to ensure the sand barren community is not currently providing habitat for any species of conservation concern. It was clear during the site visit that the open area is highly disturbed by off-road vehicle activity, and a brief scan of vegetation revealed that the site is largely dominated by common native and exotic species. However, the possibility remains that species with sand dune affinities may occur on site, such as 'Sand Cherry' (*Prunus pumila*) and/or 'Forked Three-awned Grass' (*Artistida basiramea*). If such species are found to be present, it would be worth considering alternative locations for planting.
- As per discussions at the meeting, the County is encouraged to prepare a long-term adaptive strategy for the Orrock Creek site. This is in

recognition that harsh site conditions and intensive use of the site by off-road vehicles which may present a challenge to the successful establishment of planted trees.

Please feel free to contact me should you have any questions related to this matter.

Sincerely,

Lee J. Bull, MCIP, RPP | Manager, Planning Services

Nottawasaga Valley Conservation Authority

8195 8th Line, Utopia, ON L0M 1T0
T 705-424-1479 ext. 231 | F 705-424-2115
lbull@nvca.on.ca | nvca.on.ca

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From: Mack, Stephanie [<mailto:Stephanie.Mack@simcoe.ca>]

Sent: Wednesday, August 15, 2018 10:53 AM

To: McCullough, Rob <Rob.McCullough@simcoe.ca>; Davis, Graeme <Graeme.Davis@simcoe.ca>; Cox, William <William.Cox@simcoe.ca>; Laura Lawlor <Laura.Lawlor@ghd.com>; Nicole Charlton <Nicole.Charlton@ghd.com>; Westendorp, Nathan <Nathan.Westendorp@simcoe.ca>; Chris Russell <Chris.Russell@springwater.ca>; Lee Bull <lbull@nvca.on.ca>; Mike Francis <mfrancis@nvca.on.ca>; Aldo Ingraldi (MMA/MHO) <Aldo.Ingraldi@ontario.ca>; Brent Shirley <brent.shirley@ontario.ca>

Cc: Korolnek, Debbie <Debbie.Korolnek@simcoe.ca>; Parks, David <David.Parks@simcoe.ca>; Brent Spagnol <Brent.Spagnol@springwater.ca>; Chris Hibberd <c.hibberd@nvca.on.ca>; Ross Lashbrook (MMA/MHO) <Ross.Lashbrook@ontario.ca>; Brian Dermody <Brian.Dermody@ghd.com>

Subject: Simcoe - ERRC - CPP - August 13 presentation, meeting minutes

Good morning. As follow-up to Monday's meeting regarding the Environmental Resource Recovery Centre (ERRC) – proposed Compensation Planting Plan and Terms of Reference, please see attached the presentation slides and meeting minutes.

Thanks again for attending this meeting and site tour (on a hot day!) – we appreciated your time, the discussion, and feedback on the proposal. As indicated, we are looking to finalize the TOR and are seeking comments by next Wednesday given the tight timing to prepare for spring planting. Comments can be sent to me at stephanie.mack@simcoe.ca and I will forward to GHD for their consideration. If comments have not been provided by August 22, it will be assumed that the TOR are satisfactory for the purpose of the CPP and they will be finalized and circulated.

Please let us know if you have any questions or require additional information.

Regards,

Stephanie Mack, P.Eng.

Special Projects Supervisor

County of Simcoe, Solid Waste Management
1110 Highway 26, Midhurst, ON L9X 1N6
Phone: (705) 726-9300 ext. 1924, Cell: (705) 794-0605
E-mail: stephanie.mack@simcoe.ca
simcoe.ca

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From: Mack, Stephanie
To: [Laura Lawlor](#); [Nicole Charlton](#); [Davis, Graeme](#); [Cox, William](#)
Cc: [Brian Dermody](#); [McCullough, Rob](#); [Westendorp, Nathan](#)
Subject: FW: Simcoe - ERRC - CPP - August 13 presentation, meeting minutes
Date: Thursday, August 16, 2018 12:12:45 PM

From: Shirley, Brent (MNRF) [<mailto:brent.shirley@ontario.ca>]
Sent: Thursday, August 16, 2018 11:27 AM
To: Mack, Stephanie <Stephanie.Mack@simcoe.ca>
Subject: RE: Simcoe - ERRC - CPP - August 13 presentation, meeting minutes

Hi Stephanie,

Thanks for organizing the meeting on Monday. It was very informative to see the draft CPP and to also visit the potential planting sites. I just have a couple of comments to make.

An ecological assessment of the sites prior to any work would be a good idea to ensure that the plantings are not going to have any negative impacts on SAR or other natural heritage values.

Plantings would be the preferred outcome, not other ecological enhancements as they meet the objectives for mitigation that was laid out in the EIS.

I would like to see that any tree removal (both at the ERRC site and potential restoration sites) occur outside of the breeding bird and bat window from September 1st until April 1st, to ensure no negative impacts occur to those species.

Best Regards,
Brent

From: Mack, Stephanie [<mailto:Stephanie.Mack@simcoe.ca>]
Sent: August-15-18 10:53 AM
To: McCullough, Rob; Davis, Graeme; Cox, William; Laura Lawlor; Nicole Charlton; Westendorp, Nathan; Chris Russell; Lee Bull; Mike Francis; Ingraldi, Aldo (MMAH); Shirley, Brent (MNRF)
Cc: Korolnek, Debbie; Parks, David; Brent Spagnol; Chris Hibberd; Lashbrook, Ross (MMAH); Brian Dermody
Subject: Simcoe - ERRC - CPP - August 13 presentation, meeting minutes

Good morning. As follow-up to Monday's meeting regarding the Environmental Resource Recovery Centre (ERRC) – proposed Compensation Planting Plan and Terms of Reference, please see attached the presentation slides and meeting minutes.

Thanks again for attending this meeting and site tour (on a hot day!) – we appreciated your time, the discussion, and feedback on the proposal. As indicated, we are looking to finalize the TOR and are seeking comments by next Wednesday given the tight timing to prepare for spring planting. Comments can be sent to me at stephanie.mack@simcoe.ca and I will forward to GHD for their consideration. If comments have not been provided by August 22, it will be assumed that the TOR are satisfactory for the purpose of the CPP and they will be finalized and circulated.

Please let us know if you have any questions or require additional information.

Regards,

Stephanie Mack, P.Eng.

Special Projects Supervisor

County of Simcoe, Solid Waste Management

1110 Highway 26, Midhurst, ON L9X 1N6

Phone: (705) 726-9300 ext. 1924, Cell: (705) 794-0605

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From: Shirley, Brent (MNRF)
To: [Nicole Charlton](#)
Cc: [Laura Lawlor](#); [Stephanie Mack \(InTouch\)](#); [Cox, William](#); [Davis, Graeme](#); [Brian Dermody](#); cctofiling@croworld.com
Subject: RE: RE call Sep 4 2018 to discuss MNRF CPP draft TOR comments ~COR-086822~
Date: Tuesday, September 04, 2018 3:38:05 PM

Hi Nicole,

I'm in full agreement of your comments below.

Best Regards,
Brent

From: Nicole Charlton [mailto:Nicole.Charlton@ghd.com]
Sent: September-04-18 3:21 PM
To: Shirley, Brent (MNRF)
Cc: Laura.Lawlor@ghd.com; stephanie.mack@simcoe.ca; Cox, William; Davis, Graeme; Brian.Dermody@ghd.com; cctofiling@croworld.com
Subject: RE call Sep 4 2018 to discuss MNRF CPP draft TOR comments ~COR-086822~

Hi Brent,

In follow-up to our call Sept 4, 2018, I'm providing a summary of the discussion and would like to confirm your agreement with the points below.

The purpose of the call was to seek clarification from MNRF on their written comments on the CPP Draft TOR from August 16. The relevant comments are provided in red below.

An ecological assessment of the sites prior to any work would be a good idea to ensure that the plantings are not going to have any negative impacts on SAR or other natural heritage values.

- Laura Lawlor (GHD) provided an update that GHD is undertaking a vegetation survey at the Orrock Creek site and reviewing existing available information from the Museum Tract.
- MNRF is in agreement with this approach to addressing any concerns regarding rare species.

Plantings would be the preferred outcome, not other ecological enhancements as they meet the objectives for mitigation that was laid out in the EIS.

- Brent Shirley clarified this comment means the compensation should be targeted to produce treed habitats, and that restoration of these proposed sites towards another habitat type (e.g., dune habitat enhancement) is not desirable. Brent confirmed the MNRF is supportive of the proposed afforestation and reforestation actions in the Draft Terms of Reference.

Please confirm if you have any changes or additional comments,
Thanks very much,

Nicole Charlton
Senior Terrestrial Ecologist
ISA Certified Arborist

GHD

T: 1-519-340-3839 | C: 1 519 503 6833 | F: 1 519 884 0525 | E: nicole.charlton@ghd.com | www.ghd.com
455 Phillip St, Waterloo, ON N2L 3X2 Canada

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From: Mack, Stephanie
To: [Ingraldi, Aldo \(MMAH\)](#)
Cc: [Ross Lashbrook \(InTouch\)](#); [Shirley, Brent \(MNRF\)](#); [Westendorp, Nathan](#); [Laura Lawlor](#); [Nicole Charlton](#)
Subject: RE: Simcoe - ERRC - CPP - August 13 presentation, meeting minutes
Date: Monday, August 20, 2018 10:00:31 AM

Good morning, Aldo. Appreciate your feedback and follow-up.

We are now working with the GHD team to finalize the Terms of Reference for the Compensation Planting Plan in consideration of discussion at our August 13 meeting/tour and submitted comments (including those received from MNRF on August 16).

We'll keep you updated. Thanks again.

Regards,

Stephanie Mack, P.Eng.
Special Projects Supervisor
County of Simcoe, Solid Waste Management
1110 Highway 26, Midhurst, ON L9X 1N6
Phone: (705) 726-9300 ext. 1924, Cell: (705) 794-0605
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From: Ingraldi, Aldo (MMAH) [<mailto:Aldo.Ingraldi@ontario.ca>]
Sent: Friday, August 17, 2018 3:56 PM
To: Mack, Stephanie <Stephanie.Mack@simcoe.ca>
Cc: Lashbrook, Ross (MMAH) <Ross.Lashbrook@ontario.ca>; Shirley, Brent (MNRF) <brent.shirley@ontario.ca>; Westendorp, Nathan <Nathan.Westendorp@simcoe.ca>
Subject: RE: Simcoe - ERRC - CPP - August 13 presentation, meeting minutes

Hi Stephanie,

Thank you again for inviting provincial staff to Monday's meeting to discuss the Compensation Planting Plan (CPP) for the County's ERRC project and soliciting feedback from us on the draft Terms of Reference for the CPP. It was fascinating to learn more about the County's ecological enhancement plans for this project as well as the County's forest stewardship and management practices in general.

I'm confirming that Ministry of Municipal Affairs and Housing staff do not have any comments on the draft Terms of Reference with respect to this ministry's interests.

Have a great weekend.

Aldo

Aldo Ingraldi, MCIP, RPP

Senior Planner

Municipal Services Office – Central Ontario

Ministry of Municipal Affairs and Housing

777 Bay Street, 13th Floor

Toronto ON M5G 2E5

Telephone: 416-585-6154

Email: Aldo.Ingraldi@ontario.ca

From: Mack, Stephanie [<mailto:Stephanie.Mack@simcoe.ca>]

Sent: August 15, 2018 10:53 AM

To: McCullough, Rob <Rob.McCullough@simcoe.ca>; Davis, Graeme <Graeme.Davis@simcoe.ca>; Cox, William <William.Cox@simcoe.ca>; Laura Lawlor <Laura.Lawlor@ghd.com>; Nicole Charlton <Nicole.Charlton@ghd.com>; Westendorp, Nathan <Nathan.Westendorp@simcoe.ca>; Chris Russell <Chris.Russell@springwater.ca>; Lee Bull <lbull@nvca.on.ca>; Mike Francis <mfrancis@nvca.on.ca>; Ingraldi, Aldo (MMAH) <Aldo.Ingraldi@ontario.ca>; Shirley, Brent (MNRF) <brent.shirley@ontario.ca>

Cc: Korolnek, Debbie <Debbie.Korolnek@simcoe.ca>; Parks, David <David.Parks@simcoe.ca>; Brent Spagnol <Brent.Spagnol@springwater.ca>; Chris Hibberd <c.hibberd@nvca.on.ca>; Lashbrook, Ross (MMAH) <Ross.Lashbrook@ontario.ca>; Brian Dermody <Brian.Dermody@ghd.com>

Subject: Simcoe - ERRC - CPP - August 13 presentation, meeting minutes

Good morning. As follow-up to Monday's meeting regarding the Environmental Resource Recovery Centre (ERRC) – proposed Compensation Planting Plan and Terms of Reference, please see attached the presentation slides and meeting minutes.

Thanks again for attending this meeting and site tour (on a hot day!) – we appreciated your time, the discussion, and feedback on the proposal. As indicated, we are looking to finalize the TOR and are seeking comments by next Wednesday given the tight timing to prepare for spring planting. Comments can be sent to me at stephanie.mack@simcoe.ca and I will forward to GHD for their consideration. If comments have not been provided by August 22, it will be assumed that the TOR are satisfactory for the purpose of the CPP and they will be finalized and circulated.

Please let us know if you have any questions or require additional information.

Regards,

Stephanie Mack, P.Eng.

Special Projects Supervisor

County of Simcoe, Solid Waste Management

1110 Highway 26, Midhurst, ON L9X 1N6
Phone: (705) 726-9300 ext. 1924, Cell: (705) 794-0605
E-mail: stephanie.mack@simcoe.ca
simcoe.ca

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Appendix B Compensation Details



County of Simcoe – Tree Planting Site Plan

Prepared By:	Will Cox, OPFA Provisional Member 2620
Date Prepared:	September 14, 2018
Planting Program/Funding Partner:	N/A
Property Name:	Museum Tract (including ERRC compensation planting)
Area to be Planted:	52.6 ha (7 ha allocated to ERRC compensation planting)
Estimated # of Seedlings:	151,900 (11,400 trees allocated to ERRC compensation planting)

Property Owner/s	Location of Plant
Name: County of Simcoe	County: Simcoe
Mailing Address: 1110 Highway 26 Midhurst, ON L9X 1N6	Township: Springwater Lot: Part lots 12 & 13 Concession: Con 5 & 6 Roll # (s): 434101000327008, 434101000324701, 434101000327008
Phone: (705) 726-9300	Civic Address: 1220, 1257 Anne Street

Objectives

Landscape level objective is to increase contiguous woodland cover within the broader forest complex contributing to enhanced interior forest habitat.

Site level objectives is to restore a former gravel pit by establishing early successional Pine/Oak forest on sandy (Tioga) soils. Habitat creation objectives include the creation of suitable nesting habitat for the endangered Kirtland's Warbler. Site restoration and planting is designed primarily to target Kirtland's Warbler, with appropriate mix of native tree and groundcover with regular small openings incorporated into the prescription. Other benefitting wildlife species include:

- American Woodcock
- Brown Thrasher
- Clay-colored Sparrow
- Common Nighthawk
- Coral Hairstreak
- DeKay's Brownsnake
- Eastern Bluebird
- Eastern Hog-nosed Snake
- Eastern Meadowlark
- Eastern Pine Elfin
- Eastern Ribbonsnake
- Eastern Towhee
- Eastern Whip-poor-will
- Edward's Hairstreak
- Field Sparrow
- Grasshopper Sparrow
- Monarch
- Mottled Duskywing
- Vesper Sparrow

Trees to be planted by species	
Species:	Number:
Jack Pine	106,000
Red Pine	28,900
White Pine	8,000
Black Cherry	3,500
Red Oak	3,800
White Oak	1,100
Eastern Red-cedar	600
TOTAL	151,900 (11,400 trees for ERRC compensation planting)
Note: 7 ha/11,400 trees specifically added to project for ERRC compensation planting	

Planting Site Information	
Area:	52.6 ha (including 7 ha of ERRC compensation planting)
Previous Land-use:	Aggregate extraction
Topography:	Variable – flat, ridges, undulating
Competition:	None to light
Soil Texture Group:	GSY – Gravelly Sandy & SDY – Sandy
Soil Drainage:	Rapid to well drained
Total Soil Depth:	>1.25 m
Depth to Distinct Mottles:	>1.25 m
Depth to Free Carbonates:	0 – 80 cm+

Access to Site
1220 & 1257 Anne Street North, Midhurst ON

Site Preparation Prescription
<p>Objective:</p> <p>Clear invasive Scot's pine while retaining native tree species for structure and seed source. Burn debris to prepare site for tree planting. Apply herbicide to help control non-native vegetation. Grade and level open areas. Plow site where possible to disturb soil for seeding/improve germination and to reduce competition.</p> <p>In treed areas dominated by Scot's pine:</p> <ul style="list-style-type: none"> • Remove Scot's pine while retaining red oak, black cherry white pine, red pine and jack pine that are identified with pink flagging tape • Prune all retained trees that will be in controlled burn area to a height of 4m+ and remove any combustible debris within 1 m of trunk • Complete controlled burn in areas of slash to prepare site for tree planting

Site Preparation Prescription *Continued*

In open areas:

- Manage areas dominated by non-native plants by applying FSC approved herbicide(s) in accordance with product label and provincial and federal regulations (red fescue, dog strangling vine, spotted knapweed, lily-of-the-valley, hawkweed, etc.)
- Level mounds and pits scattered across site and ridges/steep slopes where possible
- Plow site in areas of accessible topography and areas of no/low debris using disks or similar in the fall prior to planting

In under-planting area:

- Remove Scot's pine while retaining native trees (white pine, red pine, black cherry)

Planting Prescription

A landscape mosaic approach will be achieved across the site with an objective to create a specific habitat type. There will be specific prescriptions for five different areas of the site:

Pit Area (36 ha)

Plateau Area (6 ha)

Mixed Planting Areas (3.4 ha)

Open Areas (7.2 ha)

Under-planting Area (2.2 ha)

See map attached for a locations of the planting areas.

Pit Area (36 ha)

Area of former aggregate extraction excluding any areas of open or mixed planting as identified on attached map.

Soil Texture Group: GSY – Gravelly Sandy

Soil Drainage: rapid to well drained

Total Soil Depth: >1.25 m

Depth to Distinct Mottles: >1.25 m

Depth to Free Carbonates: 0-30 cm

Topography: flat areas and undulating areas in former extraction areas with, moderate to steeply sloped hillsides along pit edges

Planting method: hand plant

Spacing: 3,600 stems/hectare (5.5 ft x 5.5 ft or 1.67 m x 1.67 m)

Species: jack pine 87.5%, red pine 10%, white pine 2.5%

(see appendix for details on stock types and specifications)

Notes: Tree species are to be evenly distributed throughout the pit area at the above noted ratio. Minor species (red pine and white pine) are to be planted in small groups of 10-30 trees scattered amongst jack pine.

Plateau Area (6 ha)

Area was previously cleared land when pit was in operation, but this area was not part of the extraction area and native soil conditions exist.

Planting Prescription *Continued*

Soil Texture Group: SDY – Sandy

Soil Drainage: well drained

Total Soil Depth: >1.25 m

Depth to Distinct Mottles: >1.25 m

Depth to Free Carbonates: 80 cm+

Topography: Flat

Planting method: hand plant

Spacing: 3,600 stems/hectare (5.5 ft x 5.5 ft or 1.67 m x 1.67 m)

Species: red pine 80%, white pine 10%, black cherry 3.5%, red oak 3.5%, white oak 3%
(see appendix for details on stock types and specifications)

Notes: Tree species are to be evenly distributed throughout the pit area at the above noted ratio. Minor species (white pine, black cherry, red oak, white oak) are to be planted in small groups of 10-30 trees amongst red pine.

Mixed Planting Areas (3.4 ha)

These mixed planting areas will be scattered across the site as shown on the attached map. There will be a total of 34 – 0.1 ha plantings for a total area of 3.4 ha.

Soil Texture Group: GSY – Gravelly Sandy

Soil Drainage: rapid to well drained

Total Soil Depth: >1.25 m

Depth to Distinct Mottles: >1.25 m

Depth to Free Carbonates: 10-30 cm

Topography:

Planting method: hand plant

Spacing: 3,600 stems/hectare (5.5 ft x 5.5 ft or 1.67 m x 1.67 m)

Species: red oak 25%, black cherry 25%, red pine 20%, white pine 20%, white oak 5%, eastern red cedar 5% (trees to be planted in groups of 10 or more by species)

Open Areas (7.2 ha)

Approximately 15% of the site will not be planted with trees. Open areas will be strategically placed throughout the site considering the following:

- Existing vegetation (favour areas of desirable vegetation to retain as open)
- Soil conditions
- Topography

Open areas will be planted with a custom seed mix specific to the site. Seed species details can be found within the appendix.

Under-planting Area (2.2 ha)

This area is mixed forest with a high component of Scot's pine (understory, intermediate and co-dominant crown positions). Removal of Scot's pine will create irregular canopy openings.

Soil Texture Group: SDY – Sandy

Soil Drainage: well drained

Total Soil Depth: >1.25 m

Planting Prescription *Continued*

Depth to Distinct Mottles: >1.25 m
Depth to Free Carbonates: 80 cm+
Topography: Flat Planting method: hand plant
Spacing: 500 stems/hectare
Species: white pine 75%, red oak 25%
(see appendix for details on stock types and specifications)

Tending Prescription

Due to the significant amount of Scot's pine on the site there is likely a large seedbank. The complete removal of Scot's pine during site preparation activities should reduce this seed bank into the future but active management of Scot's pine seedlings will need to be completed for several years.

Scot's pine management will require an annual assessment until target tree species are free to grow. Scot's pine seedlings will ideally be removed by mechanical methods such as a brush saw. Optionally a herbicide could be applied to individual trees.

Once jack pine becomes established, it should compete with and shade out Scot's pine or prevent further germination.

Off road motorized vehicle use is moderate on this property and will be potentially problematic to the success of site objectives. Access needs to be restricted where possible by the implementation and maintenance of physical barriers and the modification of elevation (jumps or similar) on site. County By-law and Museum staff are to increase surveillance on site and use OPP S.A.V.E. unit and off road motorized vehicle club staff to increase enforcement, if needed.

Survival Assessments and Monitoring

Reforestation

- Tree seedling survival assessments at the end of the 1st, 2nd and 5th growing season as per standard procedures
- Assess a minimum representative sample of 2% of tree seedlings
- Refill if survival is below 70% and survival issues can be addressed
- Schedule additional annual assessment as required if deficiencies are noted

Wildlife

- Annual bird survey (June)
- Moth survey twice annually (June & August) (to complement a study done previous to habitat creation)

Plants

- Plant survey twice annually (June & August)

Unauthorized use

- Monitor for unauthorized motorized vehicle access and enforce by-laws as required to control damage to site.

Site plan approval by OPFA Member in Good Standing: I certify that I have the expertise relevant to afforestation and reforestation practices and that the site plan described above and in the following pages follows sustainable Forest management practices and has the potential to result in a well-stocked, productive forest.

Name (printed): GRAEME DAVIS

Signature: 

Date: Sept. 28 / 18



Museum Tract - Planting Site Plan



Legend

 Existing Habitat and Forest Restoration Project Area

 ERRC Compensation Planting Area

 Pit Area

 Plateau Area

 Mixed Planting Areas

 Open Areas

 Underplanting Area

260 130 0 260 Meters



Museum Tract – Stock Specifications								
Species	Quantity	Stock	Target		Minimum		Maximum	
			Height (cm)	Root collar Diameter (mm)	Height (cm)	Root collar Diameter (mm)	Height (cm)	Root collar Diameter (mm)
Jack Pine (<i>pinus banksiana</i>)	106,000	PSB-411B	20	3	12	2.3	25	N/A
Red Pine (<i>pinus resinosa</i>)	12,000	PSB-411B	15	2.6	10	2	20	N/A
Red Pine (<i>pinus resinosa</i>)	16,900	J+1.5	N/A	4.5	18	N/A	25	N/A
White Pine (<i>pinus strobus</i>)	3,000	PSB-411B	20	2.6	15	2	20	N/A
White Pine (<i>pinus strobus</i>)	5,000	J+1.5	N/A	4.5	18	N/A	25	N/A
Red Oak (<i>quercus rubra</i>)	3,800	1+0	N/A	5	25	N/A	40	N/A
White Oak (<i>quercus alba</i>)	1,100	2+0	N/A	5.5	25	N/A	60	N/A
Black Cherry (<i>prunus serotina</i>)	3,500	1+0	N/A	4.5	25	N/A	40	N/A
Eastern Red-Cedar (<i>juniperus virginiana</i>)	600	J+2	N/A	5.0	30	N/A	45	N/A
Total Trees	151,900							

Museum Tract – Seed Mix Species

Alternate-leaved Dogwood
 American Bittersweet
 Arrow-leaved Aster
 Bearberry
 Big Blue Stem
 Black Cherry
 Black Chokeberry
 Brown-eyed Susan
 Buffaloberry
 Bush Honeysuckle
 Butterflyweed
 Canada Lily
 Canada Plum
 Canada Wild Rye
 Carex brevior
 Carex eburnea
 Carex muehlenbergi
 carex siccata
 Choke Cherry
 Common Juniper
 Common Milkweed
 Dewberry
 Downy Arrowwood
 Dryland Sedge
 Early Aster
 Early Goldenrod
 Early Goldenrod
 Evening Primrose
 Field pussytoes
 Field strawberry
 Fireweed
 Graceful Sedge
 Grey Aster
 Grey Goldenrod
 Hairy Beardtongue
 Hairy Goldenrod
 Hairy-rosette Panicgrass
 Harebell
 Hoary Vervain
 Houghton's Sedge
 Huckleberry
 Indian Grass
 Kalm's Brome
 Lance-leaved Figwort
 Lindley's Aster
 Little Bluestem
 Long-headed Anemone
 Low Bush Blueberry
 Low Serviceberry (*A. laevis*)

Muhlenberg's Sedge
 Narrow-leaved New Jersey Tea
 Narrow-leaved Witchgrass
 New Jersey Tea (*C. americanus*)
 Oak sedge
 Pale Sedge
 Pearly Everlasting
 Pin Cherry
 Poverty Grass
 Poverty Oatgrass
 Prairie Brome
 Puccoon *Lithospermum carolinense*
 Purple Oats
 Pussytoes
 Red Cedar
 Red Oak
 Robin's Plantain
 Round-leaved Dogwood
 Round-leaved Serviceberry
 Sand Cherry
 Sand Dropseed
 Serviceberry spp.
 Shorter Sedge
 Showy Tick Trefoil
 Sleepy Catchfly
 Slender Wheatgrass
 Slim-leaved Witchgrass
 Smooth Rose
 Snowberry
 Starry Solomon's Seal
 Sweetfern
 Switch Grass
 Tall Cinquefoil
 Tall Lettuce
 Tall Mustard
 Thimbleweed
 Tower Mustard
 Upland White Aster
 Wavy Hair Grass
 White-stemmed mountain ricegrass
 Wild Bergamot
 Wood Lily
 Wormwood



County of Simcoe – Tree Planting Site Plan

Prepared By:	Will Cox, OPFA Provisional Member 2620
Date Prepared:	September 16, 2018
Planting Program/Funding Partner:	N/A
Property Name:	Orrock Creek North Tract
Area to be Planted:	8.7 ha
Estimated # of Seedlings:	9,500

Property Owner/s	Location of Plant
Name: County of Simcoe	County: Simcoe
Mailing Address: 1110 Highway 26 Midhurst, ON L9X 1N6	Township: Springwater Lot: Part Lot 4 Concession: Con 3W Roll # (s): 434101000200620 Civic Address: 47 Hillview Crescent
Phone: (705) 726-9300	

Objectives
Landscape level objective is to increase contiguous woodland cover within the broader forest complex contributing to enhanced interior forest habitat.
Site level objective is to establish native woodland cover within a dry, sandy, primarily open area with scattered native and non-native (primarily Scots Pine) vegetation.

Trees to be planted by species	
Species and Type:	Number:
Red Pine J+1.5	5,000
White Pine J+1.5	3,000
Red Oak 1+0	750
White Oak 2+0	250
Black Cherry 1+0	250
Shagbark Hickory 3+0 (or similar)	250
TOTAL	9,500

Planting Site Information	
Area:	8.7 ha
Previous Land-use:	Agriculture
Topography:	Flat to gently sloping
Competition:	None in open area, light in other areas
Soil Texture Group:	SDY – Sandy
Soil Drainage:	Well drained
Total Soil Depth:	>1.25
Depth to Distinct Mottles:	>1.25
Depth to Free Carbonates:	60-90+ cm weak to moderate

Access to Site
Access via 1448 Old Second South, Springwater, ON

Site Preparation Prescription
Remove Scot's pine while retaining native trees. Grade steeper topography and mounds created by illegal off road vehicle use in open pit area.

Planting Prescription
<p>The planting site consists of two differing areas. 1.6 ha is an open sandy area with little to no topsoil and very little vegetation and tree cover. This area is heavily disturbed by off road vehicle use. The additional 7.1 ha is dominated by scattered Scot's pine with some jack pine, red pine, white pine, black cherry, red oak and poplar. It is estimated that native trees occupy approximately 1/3 of this area.</p> <p><u>Open Area (1.6 ha)</u></p> <p>Planting Method: Hand Plant Spacing: 2.1 m x 2.1 m (7' x 7') or 2,000 stems/ha Tree Species: red pine (90%), red oak (10%)</p> <p>Notes: Red oak to be planted in blocks of 25-50 trees scattered throughout red pine. A custom seed mixture of native grasses, herbaceous plants and shrubs to be seeded in open area. List of species in appendix.</p> <p><u>Scattered Area (7.1 ha)</u></p> <p>Planting Method: Hand Plant Spacing: 2.1 m x 2.1 m (7' x 7') Species: red pine (40%), white pine (40%), red oak (10%), other hardwoods (10%). Other hardwoods include white oak, black cherry and hickory.</p>

Planting Prescription *continued*

Notes: Tree species are to be evenly distributed throughout the area at the above noted ratio. It is preferable if minor species (red oak, white oak, black cherry, hickory) are planted in small groups of 25-50 trees amongst pine.

Tending Prescription

Due to the significant amount of Scot's pine on the site there is likely a large seedbank. The complete removal of Scot's pine during site preparation activities should reduce this seed bank into the future but active management of Scot's pine seedlings will need to be completed for several years.

Scot's pine management will require an annual assessment until target tree species are free to grow. Scot's pine seedlings will ideally be removed by mechanical methods such as a brush saw. Optionally, herbicide could be applied to individual trees.

Off-road motorized vehicle use is high on this property and will be potentially problematic to the success of site objectives. To ensure success a combination of enhanced communications, installation of physical barriers, trail realignment and enforcement will be employed as follows:

Communications

- Information will be mailed to nearby residents explaining the project objectives and seeking cooperation
- Signs will be installed on site directing area users to 'stay on the trail'
- The OFSC (snowmobile) and OFTR (off-road motorcycle) clubs will be contacted to assist with communicating to members and assist with compliance

Trail Realignment and Barriers:

- The existing OFSC / OFTR trail will be re-routed to the south west edge of the site
- Snow fencing will be installed as required to block access from the new trail into the project site
- County will work with Springwater to install bollards to block motorized traffic from entering from Hillsvieview Crescent

Enforcement:

- Paid duty OPP will check the site for compliance a minimum of 6 visits in 2019
- County By-law Officers will provide additional monitoring and enforcement

Monitoring & Survival Assessments

- Tree seedling survival assessments at the end of the 1st, 2nd and 5th growing season as per standard procedures
- Assess a minimum representative sample of 5% of tree seedlings
- Refill if survival is below 70% and survival issues can be addressed
- Schedule additional annual assessment as required if deficiencies are noted
- Continued monitoring to control unauthorized motorized vehicle use

Site plan approval by OPFA Member in Good Standing: I certify that I have the expertise relevant to afforestation and reforestation practices and that the site plan described above and in the following pages follows sustainable Forest management practices and has the potential to result in a well-stocked, productive forest.

Name (printed): Graeme Davis, RPF



October 29, 2018

A handwritten signature in black ink, appearing to read 'Graeme Davis', written in a cursive style.

Orrock Creek North Tract - Planting Site Plan



Legend

-  Open Area
-  Scattered Scot's Pine Area



Orrock Creek North – Stock Specifications*								
Species	Quantity	Stock	Target		Minimum		Maximum	
			Height (cm)	Root collar Diameter (mm)	Height (cm)	Root collar Diameter (mm)	Height (cm)	Root collar Diameter (mm)
Red Pine (<i>pinus resinosa</i>)	5,000	J+1.5	N/A	4.5	18	N/A	25	N/A
White Pine (<i>pinus strobus</i>)	3,000	J+1.5	N/A	4.5	18	N/A	25	N/A
Red Oak (<i>quercus rubra</i>)	750	1+0	N/A	5	25	N/A	40	N/A
White Oak (<i>quercus alba</i>)	250	2+0	N/A	5.5	25	N/A	60	N/A
Black Cherry (<i>prunus serotina</i>)	250	1+0	N/A	4.5	25	N/A	40	N/A
Hickory (<i>Carya cordiformis</i> or <i>C. ovata</i>)	250	J+2	N/A	N/A	N/A	N/A	NA	N/A
Total Trees	9,500							





Orrock Creek North Tract – Seed Mix Species

Alternate-leaved Dogwood	Muhlenberg's Sedge
American Bittersweet	Narrow-leaved New Jersey Tea
Arrow-leaved Aster	Narrow-leaved Witchgrass
Bearberry	New Jersey Tea (<i>C. americanus</i>)
Big Blue Stem	Oak sedge
Black Cherry	Pale Sedge
Black Chokeberry	Pearly Everlasting
Brown-eyed Susan	Pin Cherry
Buffaloberry	Poverty Grass
Bush Honeysuckle	Poverty Oatgrass
Butterflyweed	Prairie Brome
Canada Lily	Puccoon <i>Lithospermum carolinense</i>
Canada Plum	Purple Oats
Canada Wild Rye	Pussytoes
Carex brevior	Red Cedar
Carex eburnea	Red Oak
Carex muehlenbergi	Robin's Plantain
carex siccata	Round-leaved Dogwood
Choke Cherry	Round-leaved Serviceberry
Common Juniper	Sand Cherry
Common Milkweed	Sand Dropseed
Dewberry	Serviceberry spp.
Downy Arrowwood	Shorter Sedge
Dryland Sedge	Showy Tick Trefoil
Early Aster	Sleepy Catchfly
Early Goldenrod	Slender Wheatgrass
Early Goldenrod	Slim-leaved Witchgrass
Evening Primrose	Smooth Rose
Field pussytoes	Snowberry
Field strawberry	Starry Solomon's Seal
Fireweed	Sweetfern
Graceful Sedge	Switch Grass
Grey Aster	Tall Cinquefoil
Grey Goldenrod	Tall Lettuce
Hairy Beardtongue	Tall Mustard
Hairy Goldenrod	Thimbleweed
Hairy-rosette Panicgrass	Tower Mustard
Harebell	Upland White Aster
Hoary Vervain	Wavy Hair Grass
Houghton's Sedge	White-stemmed mountain ricegrass
Huckleberry	Wild Bergamot
Indian Grass	Wood Lily
Kalm's Brome	Wormwood
Lance-leaved Figwort	
Lindley's Aster	
Little Bluestem	
Long-headed Anemone	
Low Bush Blueberry	
Low Serviceberry (<i>A. laevis</i>)	

Orrock Creek North Tract - Project Site Trail Realignment



Legend

-  Existing OFSC / OFTR Trail
-  Hillview Crescent Entrance
-  OFSC / OFTR Trail Reroute
-  Project Site



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Appendix C

Agency Comments on Draft CPP

From: Stephanie Mack (InTouch)
Sent: Monday, October 22, 2018 9:43 AM
To: Nicole Charlton <Nicole.Charlton@ghd.com>; Laura Lawlor <Laura.Lawlor@ghd.com>
Cc: Brian Dermody <Brian.Dermody@ghd.com>; Thompson, Tiffany <Tiffany.Thompson@simcoe.ca>; Davis, Graeme <Graeme.Davis@simcoe.ca>
Subject: FW: ERRC - draft Compensation Planting Plan

From: Mack, Stephanie
Sent: Monday, October 22, 2018 9:39 AM
To: 'Ingraldi, Aldo (MMAH)' <Aldo.Ingraldi@ontario.ca>
Cc: Shirley, Brent (MNRF) <brent.shirley@ontario.ca>; Benner, Kim (MNRF) <kim.benner@ontario.ca>; Lashbrook, Ross (MMAH) <Ross.Lashbrook@ontario.ca>; Thompson, Tiffany <Tiffany.Thompson@simcoe.ca>
Subject: RE: ERRC - draft Compensation Planting Plan

Good morning, Aldo. Appreciate this confirmation.

To update, we have received some comments from the NVCA on the draft which will be incorporated into the final. We are working towards circulation of the final document in the coming weeks to allow our Forestry team time to prepare for the spring planting.

Regards,

Stephanie Mack, P.Eng.
Special Projects Supervisor
County of Simcoe, Solid Waste Management
1110 Highway 26, Midhurst, ON L9X 1N6
Phone: (705) 726-9300 ext. 1924, Cell: (705) 794-0605
E-mail: stephanie.mack@simcoe.ca
simcoe.ca

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From: Ingraldi, Aldo (MMAH) [<mailto:Aldo.Ingraldi@ontario.ca>]
Sent: Monday, October 22, 2018 9:34 AM
To: Mack, Stephanie <Stephanie.Mack@simcoe.ca>
Cc: Shirley, Brent (MNRF) <brent.shirley@ontario.ca>; Benner, Kim (MNRF) <kim.benner@ontario.ca>; Lashbrook, Ross (MMAH) <Ross.Lashbrook@ontario.ca>
Subject: RE: ERRC - draft Compensation Planting Plan

Hi Stephanie,

I am confirming that Ministry of Municipal Affairs and Housing staff do not have any comments on the County's draft Compensation Planting Plan.

Regards,
Aldo

Aldo Ingraldi, MCIP, RPP
Senior Planner
Municipal Services Office – Central Ontario
Ministry of Municipal Affairs and Housing
777 Bay Street, 13th Floor
Toronto ON M5G 2E5
Telephone: 416-585-6154
Email: Aldo.Ingraldi@ontario.ca

From: Mack, Stephanie [<mailto:Stephanie.Mack@simcoe.ca>]

Sent: October 5, 2018 5:00 PM

To: McCullough, Rob <Rob.McCullough@simcoe.ca>; Davis, Graeme <Graeme.Davis@simcoe.ca>; Cox, William <William.Cox@simcoe.ca>; Thompson, Tiffany <Tiffany.Thompson@simcoe.ca>; Chris Russell <Chris.Russell@springwater.ca>; Lee Bull <lbull@nvca.on.ca>; Mike Francis <mfrancis@nvca.on.ca>; Ingraldi, Aldo (MMAH) <Aldo.Ingraldi@ontario.ca>; Shirley, Brent (MNRF) <brent.shirley@ontario.ca>

Cc: Korolnek, Debbie <Debbie.Korolnek@simcoe.ca>; Parks, David <David.Parks@simcoe.ca>; Brent Spagnol <Brent.Spagnol@springwater.ca>; Chris Hibberd <c.hibberd@nvca.on.ca>; Lashbrook, Ross (MMAH) <Ross.Lashbrook@ontario.ca>; Brian Dermody <Brian.Dermody@ghd.com>; Nicole Charlton <Nicole.Charlton@ghd.com>; Laura Lawlor <Laura.Lawlor@ghd.com>

Subject: ERRC - draft Compensation Planting Plan

Good afternoon. Further to the final Terms of Reference document circulated September 11, please see attached the draft Compensation Planting Plan prepared by the GHD team and County Forestry. This report includes planting plans for both compensation sites – the Museum Tract and Orrock Creek North Tract – and details of site assessments recently undertaken.

Please note that we are seeking comments on the draft plan by October 19 given the timing to prepare for spring planting. Comments can be sent to me at stephanie.mack@simcoe.ca and I will forward to GHD for their consideration. If comments have not been provided by October 19, it will be assumed that the CPP is satisfactory and the report will be finalized and circulated.

Please let us know if you have any questions or require additional information. Thanks again for your feedback and input into this plan. It's appreciated.

Regards,

Stephanie Mack, P.Eng.
Special Projects Supervisor
County of Simcoe, Solid Waste Management
1110 Highway 26, Midhurst, ON L9X 1N6
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From: Stephanie Mack (InTouch)
Sent: Thursday, October 11, 2018 4:23 PM
To: Nicole Charlton <Nicole.Charlton@ghd.com>; Laura Lawlor <Laura.Lawlor@ghd.com>
Cc: Davis, Graeme <Graeme.Davis@simcoe.ca>; Cox, William <William.Cox@simcoe.ca>; Thompson, Tiffany <Tiffany.Thompson@simcoe.ca>; Brian Dermody <Brian.Dermody@ghd.com>
Subject: FW: NVCA Comments - ERRC Draft Compensation Planting Plan - NVCA ID # 30106

From: Lee Bull [<mailto:lbull@nvca.on.ca>]
Sent: Thursday, October 11, 2018 11:01 AM
To: Mack, Stephanie <Stephanie.Mack@simcoe.ca>
Subject: NVCA Comments - ERRC Draft Compensation Planting Plan - NVCA ID # 30106

Good morning Stephanie

Thank you for the opportunity to review and provide comment on the draft version of the Compensation Planting Plan for the proposed Environmental Resource Recovery Center in the Township of Springwater prepared by GHD and dated October 4, 2018.

We offer the following comments:

1. In our earlier comments, NVCA staff recommended preparation of an adaptive management strategy to address site-specific concerns related to the Orrock Creek planting site (the sand pit) regarding harsh soil conditions and intensive non-permitted recreational vehicle activity. This has been partially addressed through recommendations for re-occurring Scots Pine management and replacement of unsuccessful tree stock as required. However, it is not clear how the County will re-direct recreational vehicle activity away from the planting area in order to prevent damage to planted materials. This issue should be addressed in the final report.
2. With the exception of the comment noted above, the draft Compensation Planting Plan has satisfactorily addressed the comments previously provided by NVCA staff.

Please feel free to contact me should you have any questions related to this matter.

Sincerely,

Lee J. Bull, MCIP, RPP | Manager, Planning Services

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