DANCE ENVIRONMENTAL INC.

DE-469
January 8, 2026

Attn: Michael Wilhelm

Woodland Restoration and Rehabilitation Plan
for the Proposed Harrington Pit,
Harrington ON, County of Oxford.

1.0 Introduction:

A Woodland Restoration and Rehabilitation Plan has been developed for the proposed Harrington Pit, since a section of sloped woodland (classified by the County of Oxford as “Significant Woodland”) is proposed to be included in the extraction area of the pit, due to a significant quantity of valuable aggregate resource being present.

2.0 Location of the Woodland Restoration Area:

The area of Signficant Woodland that is to be included in the area of extraction is located along the western extraction limit of the pit, totaling approximately 4 ha of treed habitat. Extraction will occur in 4 phases, with restoration being undertaken at completion of extraction of each phase. Each phase is approximately 1ha in size, see Figure 1. Phasing is identified as phase 1, 2a, 2b, and 3. The phasing proposed will allow for progressive rehabilitation, with the restoration of Phase 1 being established for >2 years before tree clearing for extraction would reach Phase 2a. This will allow for adaptive management practices to occur to improve restoration success in each successive restoration phase. A cross-section of the woodland to be removed and the 3:1 slopes and pit floor where the woodland restoration will take place is shown on Figure 2.

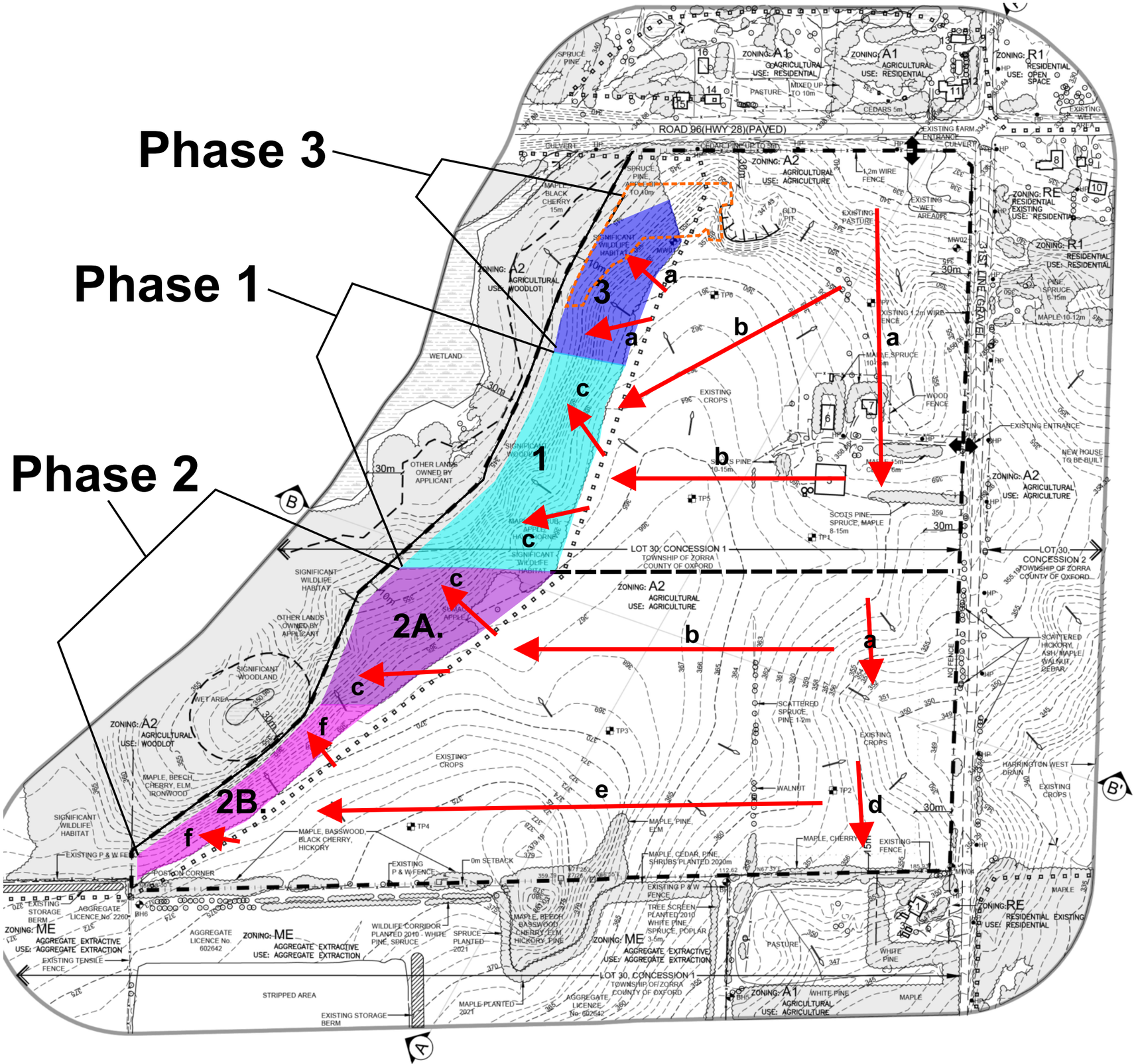
Clear targets which are to be achieved by the woodland restoration have been developed and are discussed in detail within Section 9.0 below. Phase 1 of restoration will function to confirm that woodland restoration will be successful in achieving the desired goals. Tree and vegetation clearing in the Phase 2a area of extraction shall not occur until monitoring shows that the rehabilitaiton targets have been met in Phase 1.

2.1 Existing Woodland Conditions:

Existing conditions along the slope comprise of 3 different vegetation community types (from North to South):

Address: #807566 Oxford Rd. 29, R.R. #1 Drumbo, ON N0J 1G0
TEL (519) 463-6156 Email: dancenvironment@rogers.com

Figure 1. Restoration Areas by Phase & Area, and General Direction of Extraction, Harrington Pit.



LEGEND

- 120m INFORMATION BOUNDARY
- BOUNDARY OF PROPOSED LICENCE
- BOUNDARY OF EXISTING LICENCE
- REGULATORY SETBACK AND NATURAL ENVIRONMENT EXTRACTION LIMIT LINE
- PROPERTY LINE
- UTRCA REGULATED AREA BOUNDARY AND SIGNIFICANT VALLEYLAND BOUNDARY
- 30m SETBACK FROM WETLAND
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- HYDRO POLE
- SMALL STREAM, AGRICULTURAL DITCH/ SWALE
- FIELD ENTRANCE (NO GATES)

Source:

Harrington McAvan Ltd
41 Main Street, Unit 102
Unionville, Ontario L3R 2E5
Tel: 905-294-8282 Fax: 905-294-7623
www.harringtonmcavan.com

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= Approximate Location of Western-most Natural Berm to be retained until last phase of extraction.

Area of existing Significant Woodland to be Extracted by sequence of restoration:

- = Phase 1 of Restoration
- = Phase 2a of Restoration
- = Phase 2b of Restoration
- = Phase 3 of Restoration

Scale 1:2000 (0 10 50 80m)	North	
Drawing Status: SUBMITTED FOR APPROVAL		
Drawn SB	Checked RM/BJ	Issue Date JULY 2024

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December 22, 2025

FILE NAME: 22-15/COMP/2215-1.DWG
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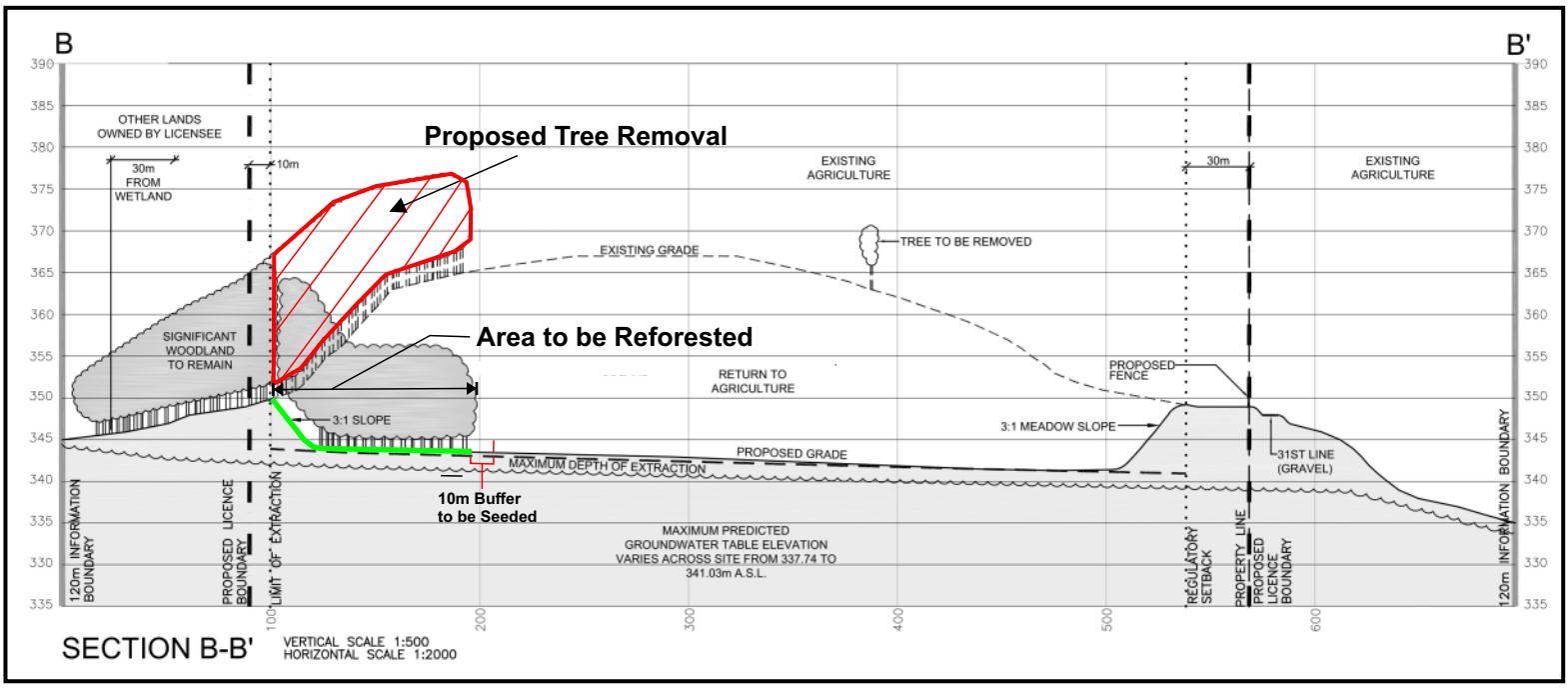

Figure 2. Cross Section of Existing Woodland to be Removed, and the 3:1 Slope and Pit Floor to be Reforested

LEGEND

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Base Map Source: Harrington McAvan Ltd

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Project Name

1000394952 ONTARIO INC.

HARRINGTON PIT

LICENCE No.
SIGNATURE OF LICENSEE
PART LOT 30, CONCESSION 1
TOWNSHIP OF ZORRA (FORMERLY WEST ZORRA),
COUNTY OF OXFORD

Scale 1:2000 (0 10 50 80m)	North	
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- Dry-Fresh Sugar Maple Forest (FODM5-1) (Phase 3);
- Buckthorn Deciduous Shrub Thicket (THDM2-6) (Phase 1 and 2a); and
- Dry-Fresh White Ash -Hardwood Deciduous Forest (FODM4-2) (Phase 2b).

The approximate boundaries of these ELC communities as they exist before extraction are shown on Figure 3.

The wooded slope for extraction of Phase 1 and 2a is a community dominated by non-native invasive species, Common Buckthorn. The ecological value of this community to the Significant Woodland, is considered to be limited and continued expansion of the area by Buckthorn poses a negative threat to the surrounding vegetation communities. Enhancement of the Common Buckthorn thicket habitat through the restoration plan is considered to be important to maintaining and improving the integrity and diversity of the Significant Woodland.

3.0 Rationale for Oak Woodland Restoration:

The goal of the Resortation Plan for the Harrington Pit is to establish an Oak Woodland within the area changed by aggregate extraction back into the Significant Woodland. The most appropriate community type based on the ELC classification is Dry-Fresh Oak Deciduous Woodland (WODM3). Drier conditions are expected on the final 3:1 sloped pit edge against the Significant Woodland, than currently exists. White Pine will be planted to compliment this community and provide shade to planted Oaks and Hickory saplings, as pines grow quickly. Restoration to this community type (WODM3) is proposed for several reasons including:

- This is a native vegetation community type which is found within the local area;
- The result of extraction may be slightly reduced soil depth and potentially drier soil conditions. An Oak Woodland (with Hickory and Pine) is considered to be a more suitable forest type to acheive sucesss in establishing woodland under such conditions. The primary trees for planting would require less watering while they establish in the planting area, and existing soils would also support their growth;
- With extraction into the significant woodland resulting in vegetation removal, the restoration site will have open sunlight conditions which are positive for successful tree and shrub planting establishment to create the Oak Woodland community. Pines will grow fast and can act to provide light shade to Oaks and Hickories planted nearby, fostering deciduous tree success in the restoration area;
- The seed and nut producing tree species of this community will provide valuable food sources for wildlife;
- Creation of a more biodiverse Significant Woodland habitat through the addition of Oak Woodland is a benefit and this woodland will provide potential bat roost habitat, as the woodland canopy establishes.

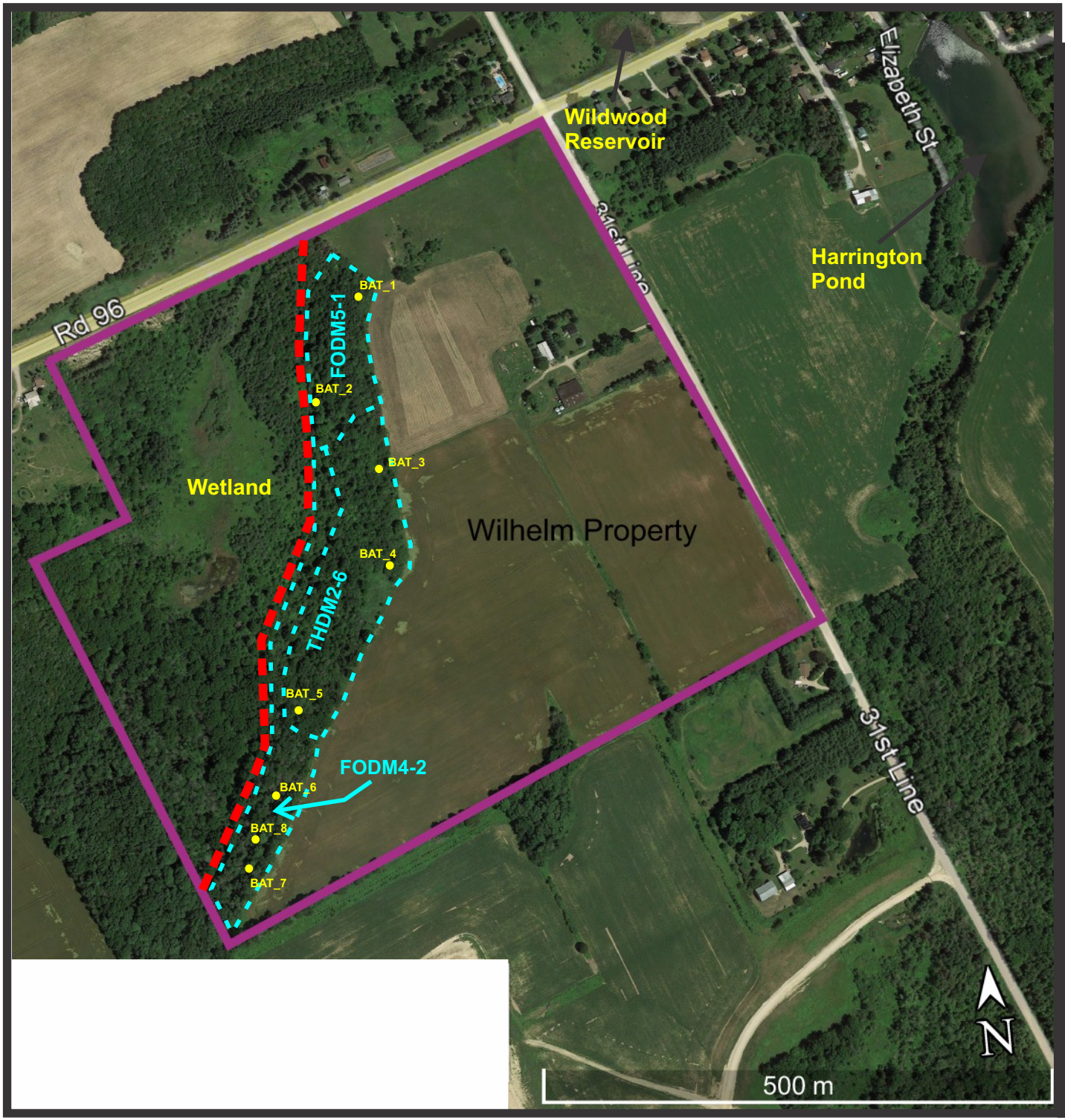

Figure 3. Approximate Locations of Acoustical Bat Survey Stations(2023), and ELC Polygons where Woodland is to be Removed

LEGEND

= Approximate Property Boundary of Owner

= Approximate Western Pit Licence Area Boundary

= Approximate Boundary of ELC Polygons Where Woodland is to be Removed

BAT_1 = Approximate Location of Bat Monitoring Station

FODM5-1 = Dry-Fresh Sugar Maple Forest

THDM2-6 = Buckthorn Deciduous Shrub Thicket

FODM4-2 = Dry-Fresh White Ash-Hardwood Forest

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DE-469

Dec. 22/25

3.1 The Objectives of the Woodland Restoration Plan:

- To meet a minimum of a 1:1 replacement area and an equal to greater density of trees within that area compared to exisiting conditions within each section of Significant Woodland. The establishment of a 10m buffer (allowed to naturalize) between the woodland restoration area and the agricultural field to the east will result in a greater area being re-established as Signifcant Woodland than currently exists.
- An equal or greater density of native trees will be planted within the restoration area phases than currently exists. Existing conditions in each restoration phase, for average separation between mature trees has been identified as:
    - Phase 1 Restoration Area –trees are 5-10m on center
    - Phase 2a & b Restoration Area –trees are 10-15m on center
    - Phase 3 Restoration Area –trees are 3m on center.
- Excelerate the natural succession process in the restoration areas where extraction occurs in the Signficant Woodland to create a forested community with increased species diversity and abundance through native species plantings.
- Establish an Oak Woodland (WODM3) which is dominated by Oak, Hickory, and Pine through ecological restoration actions.
- Extraction phasing and subsequent progressive restoration will be undertaken to limit the time during which woodland habitat is absent, before it is re-established as WODM3 Woodland. This will also result in the Phase 1 restoration area being established for >2 years before the extraction requires the next phase of trees be removed.
- To monitor the implementation of the Restoration Plan to ensure objectives are met and use adaptive managment practices, as needed, to meet those objectives. Monitoring in the first area of restoration will inform the next phase of restoration, incorporating lessons learned, based on the site specific conditions and will help to develop Best Management Practices (BMPs) for this type of restoration.

4.0 Woodland Assessment Prior to Tree Removals

Documentation of Existing Forest Conditions:

a) A forest inventory shall be undertaken to further document in detail the existing conditions in each phase of tree removal, in the year prior to any clearing occurring to allow for extraction. Thorough analysis of existing vegetation species, their abundances, soil conditions, site topography, shall be used to inform the restoration strategies for each area where restoration will be needed. The forest inventory shall also identify the presence and abundance of invasive species, and shall be mapped so that they can be eradicated using herbicides or other best practices for each species identified, as required.

b) The depths of soils within each restoration area shall be confirmed prior to clearing. It is already known that the topsoil layer on the existing slopes is shallow, since much exposed stone is present on the slopes (most

topsoil likely has washed downslope over the years into the valley bottomlands).

5.0 Detailed Restoration Prescription Development:

- Detailed restoration prescriptions for each phase of restoration shall be developed based on the exisiting woodland conditions for each phase of restoration, prior to starting restoration of a given phase. Detailed restoration prescriptions for Phase 1 have been provided in this document. The following information was used to prepare the Phase 1 restoration plan and shall similarly be used to develop Phase 2a & 2b, and Phase 3 restoration plans:
    - Timing of year for planting;
    - Site preparation needs including soil placement;
    - Locations for wood debris;
    - Sourcing for trees/shrubs/herbaceous species and list of native species to be planted, sizes and numbers;
    - Meadow/wildflower seed mix type and method/approach to seed placement within the restoration area;
    - Approximate locations for planting nodes and the numbers of each species to be planted in a given planting node;
    - Recommendations for watering plantings;
    - Timing of condition assessments of plantings;
    - How invasive/non-native species will be dealt with within the restoration areas; and
    - Recommendations for locations of transplanted herbaceous species from the next phase of woodland to be cleared.
- Prior to restoring woodland soils, and any planting occurring, the eastern edge of the restoration area shall be surveyed and staked according to the limits of the historical woodland edge. This shall define the limits of where active restoration is to occur.
- To ensure that herbicide and insecticide overspray and agricultural tillage on the adjacent rehabilitated agricultural lands does not impact the edges of the restored Significant Woodland, a 10m wide undisturbed buffer shall be established between the eastern restored woodland edge and the western agricultural field edge. This 10m wide buffer area shall be seed with MTO Roadside Seed Mix, and invasive/non-native plant species will be controlled in this area, during the active woodland restoration phases. This will also function to increase the size of the Significant Woodland habitat compared to exisitng conditions.

6.0 **Invasive Species Control:**

- The woodland restoration shall incorporate plans to address invasive species, since the existing natural environment studies have identified the THDM2-6 Buckthorn Thicket community as having Common Buckthorn and other herbaceous species, such as Garlic Mustard, growing

throughout it, and in many areas with dense germination of Common Buckthorn seedlings.

- The identification of the locations of significant areas of invasive/non-native species along with the densities and size of area, shall occur during the forest monitoring, prior to any vegetation clearing.
- The portion of THDM2-6 community in restoration Phase 1 shall undergo active control measures to eliminate the invasive species within it, prior to any soil removal occurring (so that the soil seed bank will contain only desirable native species propagules and not those of invasive species).
    - This approach to reduce the invasive species contributing to the seed bank in the woodland soils in the years prior to soil relocation, and early removal/killing off of larger specimens is anticipated to force germination of the existing seed bank of invasive species, which can then be subsequently killed off as well, to greatly reduce/eliminate their presence. For example, Common Buckthorn seeds may remain viable for 3-5 years, so the proposed approach is needed to significantly reduce/eliminate undesired invasive species being present in the restored areas (UTRCA, undated). Common Buckthorn also creates higher Nitrogen levels in soils around it, impacting the growth of native species.
- Primary control of invasives shall be through use of broad-leaf or basal herbicides in conjunction with cutting and removing any woody stems of invasive species identified (Invasive Species Centre & Ontario Invasive Plant Council 2024).
- During restoration phases invasive shrub and herbaceous species shall continue to be managed by removal (cutting) or additional applications of herbicides, as best management practices recommend.
- Handling and time of cutting is important for Common Buckthorn. Cutting shall occur in Winter, or early Spring before any berries are produced, to reduce issues with spreading seed/berries within the project site during their removal. (Invasive Species Centre & Ontario Invasive Plant Council 2024).
- Common Buckthorn leaves and bark contain a chemical called “emodin” which acts to inhibit growth and germination of native species. Management of this already known invasive species present in the restoration areas shall involve burning of all Buckthorn wood, leaves and berries on site, in a safe location away from the woodland restoration area.
- Management actions (timing, locations, methods etc.) to control undesired invasive species within the planting areas shall be identified through the monitoring and reporting process for each of the restoration phases, identifying successes and failures of the approaches taken.

7.0 Steps in Woodland Material Salvage:

7.1 Woodland Soil Salvage:

A) Prior to tree removal, multiple locations throughout the phase area shall be used to identify and document the soil horizon profile for the area, to detemine and to guide the machine operators when removing soils from the cleared woodland. This will be undertaken for all phases of tree removal (Phase 1, 2a, 2b, and 3).

B) Post tree removal, the soil horizons shall be separated during handling and relocation to ensure soils of the "A horizon" are kept in their own separate stockpiles, labelled by soil type. Lower soil horizons (root zone soils) are to be kept in their own labelled stockpiles of the same dimensions.

All woodland soils stored will be in flat stockpile areas of 50x50m in size at maximun, and at a depth of <50cm maximum. This same approach will be used for each phase of tree removal (Phase 1, 2a, 2b, and 3).

Key procedures to stockpiling the woodland soils during extraction include:

a. Stockpiles shall be a flat area of 50x50m, that does not exceed 50cm in height (this ensures aerobic conditions) to keep propagules, fungi, bacteria, arthropods and other lifeforms alive until they are returned to the restoration area they came from. This avoids the weight of deeper stockpiles creating anerobic conditions that may kill off the propagules, fungi, bacteria, arthropods and other lifeforms that are being protected.
b. Separate the materials removed from cleared woodland into their layers, with different stockpiles for mineral soil (A horizon and leaf-litter), root zone soils, and woody debris (branches/trunks).
c. The qualified person supervising the woodland soil removal will identify to the machine operator(s) which tree & shrub stump/root masses within the cleared area are to be dug out with soils intact and placed within the 'A Horizon' woodland soil layer storage area.
d. Wood debris (branches, trunks, wood chips etc.) from tree clearing shall be stored in a suitable temporary storage area in piles and will be returned back to the restoration area once extraction is completed and slopes (3:1) are established.
e. The woodland soils shall be stored for no greater than 20 months from the time of soil removal, which allows for 2 extraction season to remove aggregate from the treed slope and establish a 3:1 slope to allow the return of the woodland soils. Stockpiles of up to 6m in height are recommend to be stored for <8 months (Natural Resources Canada, 2017) and other sources indicate potential to store soils in stockpiles for up to 2 years (UTRCA 2012). Storing the woodland soils flat, at <50cm in depth is proposed, as this will

duplicate more natural conditions than in conical stockpiles, allowing for soil to retain the desired mycorrhiza.

f. Woodchips made from tree and shrub branches from the tree clearing of the same phase as soils are removed will be scattered over <60% of the upper woodland soil strata layer stockpile. This will function to block direct sunlight on the soil, help retain moisture and provide continued organic matter for decomposition during the soils storage period. This will help benefit the mycorrhiza during the ≤20 month storage period.
g. Stockpiling of woodland soils is to be kept separate from other topsoil stockpiles on-site, and the re-application of the soil layers to the proposed woodland restoration areas shall be overseen by a qualified person.
h. Upon final 3:1 slope creation and grading, stored woodland soils are to be returned to locations selected as restoration nodes. Root layer soils shall be returned first, in an adhoc manner to allow for recreation of natural/random hummock terrain to increase the microclimate diversity of the restored woodland in the planting nodes. Subsequently the top mineral soil layer shall be carefully spread over the previous soil layer. This shall be followed by returning logs, branches, leaf matter etc. onto the topsoil layer (Natural Resources Canada, 2017). On the areas outside the restoration nodes, topsoil shall be added as needed, and machinery will work in a direction and manner so as not to pass through restoration nodes as soils are returned to each planting node, to avoid soil compaction.

The above noted procedures “a to h” will be used for each Phase of tree removal, but will remain flexible to the development of BMPs based on the results from preceeding restoration phases.

The potential for use of mycorrhizal powders/pellets was discussed with MNR, however, lack of suitable commercially available options for woodlands was identified as a current limit to implementing its use at the present time. Therefore its use in not recommended as part of Phase 1 restoration. If future studies show evidence that mychorrhizal powders are effective in a woodland restoration context their use could be considered in Phase 2a, 2b and 3. They could be used if such powders are commercially available, and if significant restoration benefit is expected.

7.2 Plant Salvage from Extraction Area In Significant Woodland

The restoration Phase 1 area contains a very limited abundance of native plant species suitable for transplanting. Most native plants are individuals, with very few areas found with clusters of numberous individuals. It has been determiend therefore that there will be no transplanting of herbaceous species from Phase 1, prior to woodland soil removal for storage.

Plant salvage will start with Phase 2a, once the Phase 1 restoration success criteria (see Section 10.0 below) have been met, and will be transplanted to the Phase 1 restoration area prior to tree clearing in the Phase 2a area.

Native species noted within the Phase 2a area (based on observations from 2024) with potential for tranplanting include:

  - Herbaceous species: May-apple, Yellow Dog's-tooth Violet, Jack-in-the-pulpit, Red Raspberrry, Bloodroot
  - Shrubs: Highbush Cranberry, Alternate-leaved Dogwood, Gray Dogwood, Black Currant, Nannyberry (all sapling size)

- Any tranplanted species to the Phase 1 restoration area will be planted along outer edges of the plantings nodes or gaps within the planting nodes. The species and numbers will be recorded and mapped as part of the transplanting process, and will be part of active monitoring.
- Plant salvage process for all Woodland Restoration Phases:
  - Prior to tree clearing and soil stripping in Phase 2a suitable native plants, as noted above, will be transplanted to the Phase 1 restoration area, following the same approach identified above.
  - Prior to tree clearing and soil stripping in the Phase 2b restoration area, suitable native plants will be moved to the Phase 2a restoration area, following the same approach identified above.
  - Prior to tree clearing and soil stripping in the Phase 3 restoration area, suitable native plants will be moved to the Phase 2b restoration area, following the same approach identified above.

8.0 Post Extraction Restoration

8.1 Restoration Plantings Approach:

- The woodland restoration shall involve restoration methods including use of tree/shrub plantings, natural regeneration from forest soils, grass/wildflower seeding, and transplanting herbaceous species prior to site clearing.
- The relocated soils of the woodland prior to extraction are considered to be the most appropriate medium in which to establish the tree, shrub and herbaceous species to be used to jump start succession within the restoration area. The returned forest soils within the restoration area will contain a natural seed bank from which some orginal vegetation from the woodland will be able to germinate.
- The Harrington Pit restoration area shall be reforested by direct planting of trees and shrubs, with supplemental diversity of the restoration woodland resulting from the seed bank present within the original woodland soils returned to the planting area.
- There is an expectation that natural regeneration will also occur through seed dispersal from the undisturbed Significant Woodland to the west (Hughes, J.W. *et al*. 1988).

- Appendix I contains a species list of suitable species to be selected from for the planting nodes within Phase 1.

8.2 Planting Nodes:

- Based on the size of each restoration Phases being 1ha, planting nodes shall be approximately 9x12m in size. The total number of planting nodes in each Phase shall be based on the size/shape of each Phase of restoration. In Phase 1 the exisitng conditions show trees being at 5-10m on center throughout. The planting of trees at 3m on center means a greater density of trees will be planted within Phase 1 compared to exisitng conditions.
- Phase 1 shall contain 10 restoration nodes (9x12m in size).
- Each planting node will contain: trees- 20 planted at 3m centers; shrubs - 10 planted in clusters of 2-4 individuals; herbaceous species- 9 planted in groupings of 2-3 individuals.
- The return of soils in Restoration Phases 1, 2a, 2b and 3 shall be undertaken in the following manner:
  1) Areas on the pit floor shall be ripped to eliminate compaction of soils, in the same manner used to return non-restoration areas of the pit floor back to agriculture.
  2) A layer of topsoil shall be placed over the prepared pit floor and 3:1 slopes of the area for restoration.
  3) Locations of the planting nodes shall be marked out by the qualified person completing the restoration, using stakes.
  4) The stored woodland soils shall be placed within the area marked as a planting node, in the proper soil profile layers as they were removed, and an area 1-2m outside of the planting node shall also receive these soils.
  5) Small wood debris saved for restoration shall then be placed within the planting nodes.
- Steps 2-5 shall be undertaken progessively in stages moving from west to east to reduce compaction of the soils etc., and to avoid equipment entering planting node areas.
    - The stored woody debris (tree/shrub tops) medium to larger in size shall be placed on the outer edges of planting nodes or inside, to help act as a deterent to deer. Larger logs shall be placed upslope of planting nodes on the 3:1 slope area to help reduce erosion, while plants are establishing.
- In Phase 1 areas without tree, shrub, herbaceous species plantings/growth, or wood debris shall be seeded in by hand over an approximately 10m radius around each of the planting nodes using a grass and wildflower seed mix (See Figure 4). The recommended seed mix shall include the following or equivalent:
    - Pollinator Habitat - Dry Meadow Seed Mix, the species within the seed mix are provided in Appendix I
      (seed mix source: St. Williams Nursery and Ecology Centre)

Close up of Planting Node

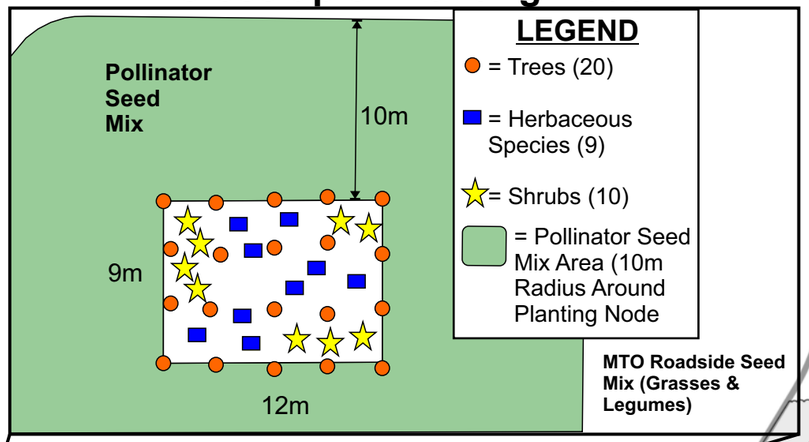
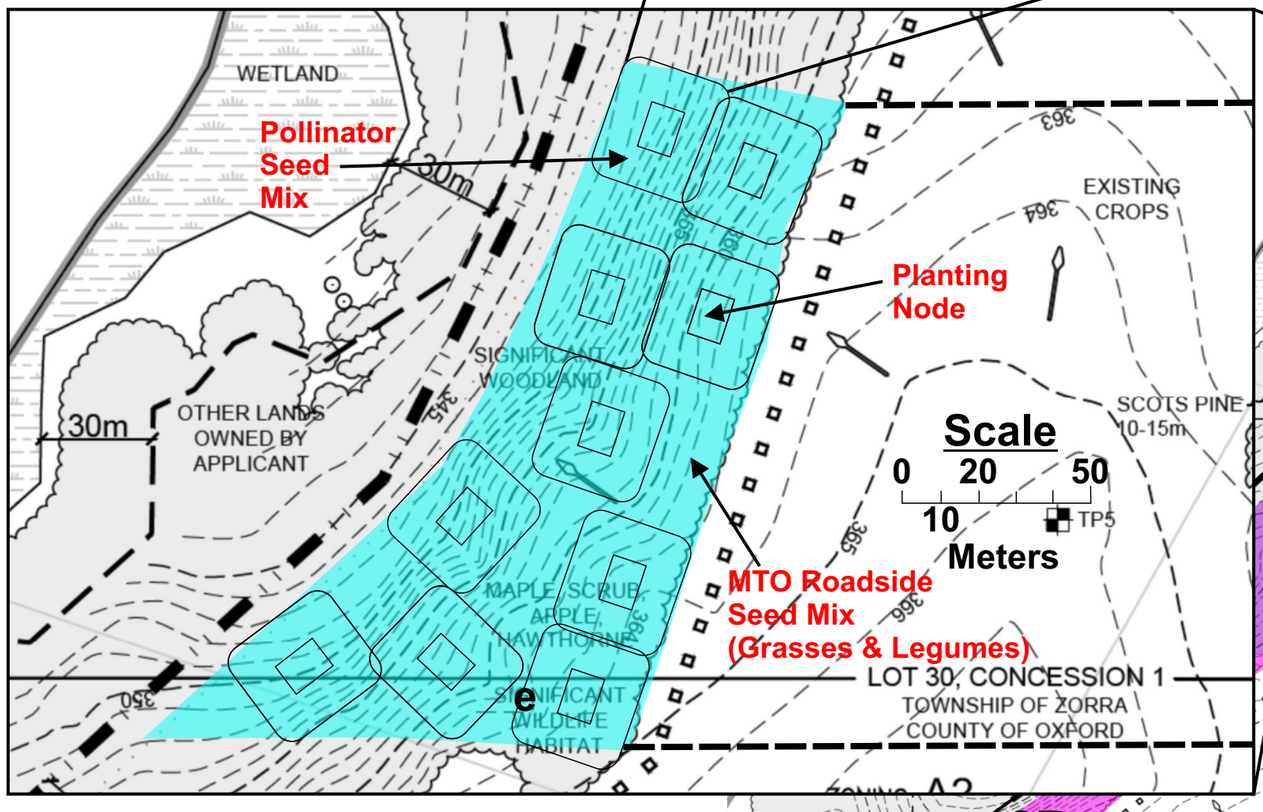
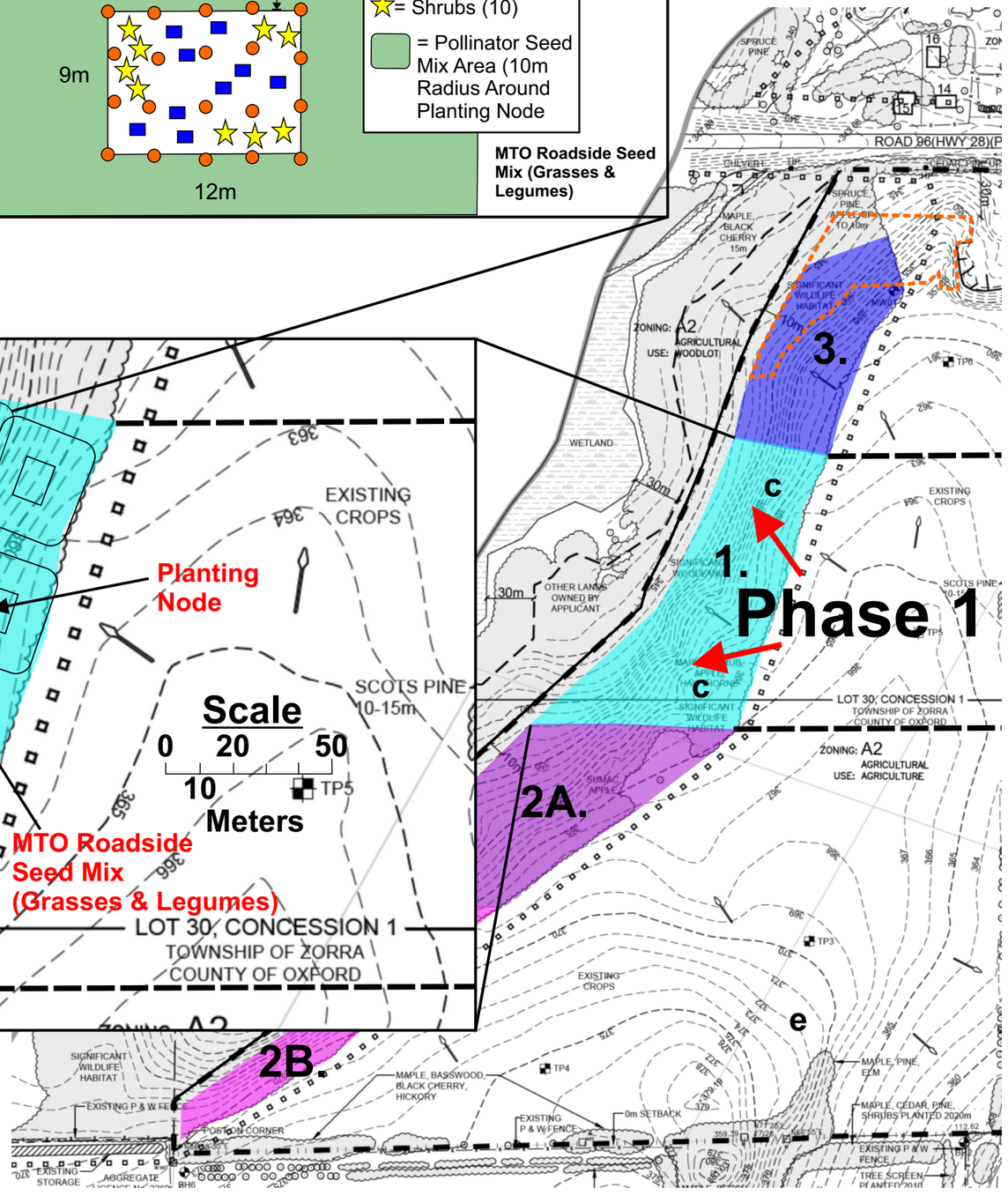


Figure 4. Planting Approach for Restoration Phases and Planting Nodes, Harrington Pit.





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- Any openings of bare soils outside of the Restoration planting node and 10m radius of native seed mix, will be planted with the MTO Roadside seed mix of grasses and legumes(ie. from General Seed Company), See Figure 4. The MTO Roadside seed mix comprises of:
  Creeping Red Fescue (52%); Kentucky Bluegrass (10%); Turf-type Perennial Rye-Grass (35%); and White Clover (3%).
- This seed mix will be used in the gaps between planting nodes and function as the access routes for watering, maintenance (eg. control of invasives), monitoring etc., to reduce impacts to the pollinator seed mix areas.
- Use of seed mixes will also assist in soil stabilization, reduce opportunity for inasive species growth, and will create pollinator habitat during early stage restoration, providing increased insect populations which can act as food sources for Eastern Wood-Pewee and Wood Thrush. Based on the success of this approach to seeding ground cover, the successive restoration areas will follow this approach or be adjusted, as needed, to increase success of germination.
- Deer are present within the area, so the restoration plans shall incorporate the strategic use of options to reduce deer browse impacts to plantings within each restoration phase, as needed and determined from implementation of an adaptive management approach based on monitoring findings.
- The planting approaches, soil management, monitoring and reporting shall be undertaken by a qualified person. The annual monitoring report (to be prepared by a qualified person), shall be completed before March 1 following the monitoring year, and shall also be appended/attached to the annual compliance assessment report that is submitted to MNR.
- The qualified person completing the restoration will prepare mapping of the Phase 2a, 2b and 3 prior to the tree removal at each phase, informed by the previous phase(s) outcomes.
- The qualified person may make recommendations to improve the approach to achieve the establishment of the WODM 3 community type.

8.3 Oak Woodland Restoration Planting List:

A selection of trees, shrubs and herbaceous species have been selected for planting to create the desired Oak Woodland to diversify the Significant Woodland, and provide improved habitat for bats, birds and other wildlife species.

A list of species deemed as suitable for the restoration planting goals is provided in Appendix II. This is an overall recommended species list and at the time of restoration, based on availability of nursery stock, a portion of the shrub and herbaceous species in the list are to be selected for use in the proposed planting nodes. The tree species within the Appendix II list should be widely available and all species listed should be used. White Oak shall be the most abundant species planted followed by both White Pine and Butternut Hickory (Other

species can be planted to a lesser degree). This shall be the consistent approach in all restoration phases.

All plantings and seeding shall occur in early Spring to ensure proper establishment and time to evaluate survivability of all plantings and the success of the grass/wildflower seeding.

8.4 Restoration Approach for Phases 2a,2b, and 3

- The restoration plan sections 4 to 8 within this document provide an outline of approach and methods to be employed for not only restoration phase 1, but also Phases 2a, 2b, and 3.
- As noted throughout the restoration plan, revisions or improvements to the approaches laid out for the phase 1 restoration area will remain open to adaptation for the remaining restoration phases to ensure success of the restoration.
- Adjustments to the approaches or methods wil be determined and recommended by the Qualified Person undertaking the restoration for the proponent. If changes are identified to be needed to benefit the restoration actions, then the Qualified Person will document their recommendations and rationale for changes, in the annual monitoring report.
- The intent of restoration planting in Phases 2a, 2b, and 3 is that similar densities, species, and diversity to Phase 1 plantings will be used in all restoration phases.
- The use of similar planting densities to Phase 1 restoration, in Phases 2a, 2b, and 3 will result in greater tree and herbaceous species density than currently exists in the Signifciant Woodland where restoration will be occuring due to extraction.
- Starting in Phase 2a the restoration will include relocation of some native plants prior to tree clearing in Phase 2a. The plant salvage from phase 2a will result in plants/shrubs being relocated to the Phase 1 restoration area. Details of the approach are discussed in section 7.2

9.0 Monitoring, Maintenance and Reporting:

- Monitoring of each restoration Phase shall start after all plantings in the planting nodes are installed, and all seeding is completed (this includes both the pollinator seed mix and MTO roadside seed mix).
- Monitoring shall occur throughout the growing season to ensure plantings are receiving enough water etc. and to assess the condition of planting areas. Memos shall be prepared for the client describing results, issues and solutions during the tending period.
- Watering the restoration area shall occur, as needed, to ensure survival of the tree/shrub/herbaceous species plantings, as well as, to ensure germination of the ground cover grass/wildflower seed mix spread throughout the restoration area.

- Review of the status of invasive species within the restoration area shall occur near the end of the growing season so that any required management actions needed can occur prior to the first Winter of the restoration plantings.
- The proponent shall be provided summary updates promptly after monitoring has occurred on site, to ensure that any immediate requirements such as watering etc. are addressed, so that the proponent can take timely action to ensure success of the woodland restoration.
- As part of taking an adaptive management approach, the monitoring, reporting, and documentation shall be used to adjust the woodland restoration program to achieve the identified targets and goals of the woodland restoration.
- Monitoring results of restoration plantings shall assess whether the indicators of success for the forest restoration are being met (that the 80% minimum survival rate of plantings is achieved).
- Photo monitoring locations shall be selected within each restoration phase. Locations shall be marked with a wood stake or steel t-bar to standardize photo locations, and all cardinal directions will be photographed annually around similar dates and times of year to allow for comparison over time.
- Monitoring and reporting shall be undertaken by a qualified person.
- Monitoring shall be undertaken to observe survivorship within the planting nodes, any relocated woodland plantings, and the pollinator seed mix areas within the restoration area to trigger any need for any replacement plantings or additional seeding.
- Monitoring shall continue in each phase until the qualified person documents that sufficient trees have reached the free-to-grow stage, and groundcover in each phase has been established.
- Monitoring will occur after every 5 years, once the free-to-grow stage is reached, and until ≥85% of Oak Trees within the planting nodes have reached a 4 inch DBH, and the target Oak Woodland is confirmed to be established.
- If the annual monitoring identifies that plantings have failed to establish, then recommendations are to be made for each planting node location, indicating species and numbers of individuals that need to be replaced. Monitoring should help identify the likely cause of failure for planting/seeding establishment (need for additional watering, soils quality, etc.). Recommendations shall be made and actions shall be taken to implement the recommendations in order to ensure that the success criteria for the restoration area shall be met.

10.0 Woodland Rehabilitation Targets

Tree and vegetation clearing in Phase 2a of extraction shall not occur until Phase 1 monitoring shows that the following rehabilitation targets are met. This approach will be the same for each of the next proceeding restoration phases.

The criteria to be met in order to proceed with tree removals within the next phase, are as follows:

1) **Soils:** Confirm that woodland soils were stored flat on the pit floor in an contiguous area of <50x50m, at a soil depth of <50cm, and those soils were then placed within the planting nodes of the restoration area from which they originated.
   Confirm that woodland soils stored during extraction were returned within ≤20 months from the time of their removal. If these conditions are met then the success criterion for soils shall be considered to be met.

2) **Survival of Plantings:** Prior to tree removal in the next phase, planting nodes will be randomly selected (6 of 10) for monitoring within the Phase being assessed for survivability. This assessment is to occur in September. When ≥80% of all species introduced to the planting nodes are in the free-to-grow stage the planted species survivability criterion will have been met, and tree removal can begin in the next phase. Species planted in each planting node will be known from the planting lists created for each planting node.

   Free-to-grow stage is defined for the purposes of this Restoration Plan as "the point at which the plantings (trees, shrubs, herbaceous species) no longer require human intervention (ie. watering, weeding, replanting etc.)".

3) **Achieving Increased Species Diversity in the Significant Woodland:** The species diversity (number of species) in the pre-extraction Phase being assessed (using the ELC community from the NETR plant list) will be compared to the species diversity within the planted restoration areas of the same area.

   The post-extraction species list will be created during a walk-through of the restoration area, by a qualified person. The post-extraction list will be compared to the pre-restoration area species list (which was created in the same way). This assessment will identify if a greater plant species diversity was achieved through the restoration (this will also meet MECP SAR bat requirements of the C-permit). Failure to meet this criterion will result in recommendations of species and locations for additional plantings to achieve the goal of increased plant species diversity. Once increased species presence is confirmed this criterion will be considered to have been met.

4) **Assessment of Invasive Species:** Invasive species presence and abundance within the restoration area will be identified.

   Six of 10 restoration nodes will be randomly selected for assessment, a stake will be placed in each planting node, where a 1x1m quadrat will be used to determine percent (%) cover of invasive species in the plot, with

the stake being located at the north corner of the quadrat. These surveys are to be undertaken in September.

Success in relation to invasive species control will be considered achieved if ≤20% invasive species cover is confirmed in each of the 6 quadrats surveyed. If this is not achieved, management actions for invasive species control will be recommended, and needed action will be implemented. The restoration plots that failed to meet the criteria will then be re-assessed by the qualified person to confirm invasive control measures were taken, and were successful in achieving the ≤20% invasive species cover criterion. Control measures are to be repeated until success is achieved.

5) **Bat Houses:** All bat houses (4) installed within Restoration Phase 1 and the 4 bat houses installed in the northern corner of the licence area to compensate for times during extraction when no bat houses can be installed, shall be assessed and confirmed in good functional condition prior to any tree removal in the next Restoration Phase. In each successive phase of restoration the previous phase's bat houses shall be assessed again before the next phase of tree removal is allowed. Any repairs needed to achieve this success criterion will be made and implemented in order to meet this criterion, to allow for the next phase of tree removal. Each phase of tree removal will have 4 bat houses installed during restoration, resulting in 16 bat houses in the 4ha where tree removal will occur, plus 4 bat houses located in the northwest corner of the licence area, resulting in a total of 20 bat houses along the west licence edge. Details of bat house type, installation, locations and timing of install and monitoring are provided in the Overall Benefit Permit for SAR bats.

6) **Pollinator Seed Mix:** The use of the pollinator seed mix in the restoration plan was to meet the goal of increasing vegetation species diversity and to increase insect abundance and diversity. Success of the pollinator seed mix will be determined by the achievement of successful establishment of the seed mix, where 6 of the planting areas will be assessed to confirm that no areas of >10x10m are present without evidence of the pollinator seed mix species being present, to be determined by the qualified person. This will confirm that no large barren patches are present where the seed did not take hold. Any areas >10x10m with no pollinator seed mix species present shall be reseeded until the criterion is met.

Success of the Phase 1 restoration area work will be achieved when all of the 6 success criteria are met. All criteria must be met prior to tree removal in the Phase 2a restoration area. If any of the criteria are not met then actions are to be proposed and implemented in order to achieve all success criteria.

An Adaptive Management approach will be implemented to adjust the success criteria of the restoration as may be required (i.e. impact of climate change to the study area may influence success criteria etc.).

11.0 Conclusion:

We anticipate that this Woodland Restoration and Rehabilitation Plan and Monitoring Program is satisfactory, and addresses the MNR concerns to ensure that the PPS (2024) Policies 4.1.5(b), 4.43, 4.53, and the ARA Section 12(1)a for no significant impact to the environment are met. When successfully implemented, the proposed plan will ensure that there will be no reduction in area and quality of the Significant Woodland, and that Significant Wildlife Habitat will not be negatively impacted. The inclusion of a 10m wide setback from the surveyed restoration edge will function to increase the natural habitat area of the Significant Woodland. No significant impact to the Significant Woodland will be achieved through the restoration of the woodland by creating a contiguous native species dominated community, and by replacing a dense non-native Buckthorn community of limited diversity. The Oak Woodland will provide beneficial foraging habitat for bats during early restoration phases (grass and wildflower seeding), and the woodland tree species planted, which will dominate the community, will provide potential bat roosting habitat as the tree canopy develops.

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Please contact us if there are any questions.

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APPENDIX I

SPECIES COMPOSITION
OF
POLLINATOR HABITAT - DRY MEADOW SEED MIX
(ST. WILLIAMS NURSERY AND ECOLOGY CENTRE)

SPECIES COMPOSITION
POLLINATOR HABITAT –DRY MEADOW SEED MIX
(SOURCE: ST.WILLIAMS NURSERY AND ECOLOGY CENTRE)

- Virginia Wild Rye - Elymus virginicus
- Indian Grass - Sorghastrum nutans
- Little Bluestem - Schizachyrium scoparium
- Switch Grass - Panicum virgatum
- Hairy Beard-Tongue - Penstemon hirsutus
- Common Evening Primrose - Oenothera biennis
- Foxglove Beard-Tongue - Penstemon digitalis
- Brown-Eyed Susan;Black-Eyed Susan - Rudbeckia hirta
- Tall Cinquefoil;Prairie Cinquefoil - Potentilla arguta
- Tall Dropseed;Rough Dropseed - Sporobolus asper
- Wild Bergamot - Monarda fistulosa
- Blue Vervain - Verbena hastata
- Virginia Mountain Mint - Pycnanthemum virginianum
- Smooth Aster - Symphyotrichum laeve
- Gray Goldenrod - Solidago nemoralis
- Upland White Aster;Upland White Goldenrod - Solidago ptarmicoides
- Arrow-Leaved Aster - Symphyotrichum urophyllum
- Sweet Ox-Eye - Heliopsis helianthoides
- Slender Mountain Mint - Pycnanthemum tenuifolium
- Dwarf Blazing Star;Cylindrical Blazing Star - Liatris cylindracea

APPENDIX II

VEGETATION SPECIES LIST
FOR
RESTORATION PLANTINGS

Appendix II. Vegetation Species List for Oak Woodland Restoration Plan

Common Name	Scientific Name	Common Name	Scientific Name
Trees		**Shrubs**	
Red Oak	*Quercus rubra*	New Jersey Tea	*Caenothus americanus*
White Oak	*Quercus alba*	Downy Arrowwood	*Viburnum rafinesquianum*
Bur Oak	*Quercus macrocarpa*	Fragrant Sumac	*Rhus aromatica*
White Pine	*Pinus strobus*	Stiff Dogwood (Gray Dogwood)	*Cornus racemosa*
Bitternut Hickory	*Carya codiformis*	Sassafras	*Sassafras albidum*
Shagbark Hickory	*Carya ovata*	Maple-leaf Viburnum	*Vibernum acerifolium*
		American Hazelnut	*Corylus americanus*
		SmoothRose	*Rosa Blanda*
		Carolina Rose	*Rosa carolina*
Flowering Plants		**Grasses, Sedges**	
Sweet Bedstraw	*Galium triflorum*	Pennsylvania Sedge	*Carex pensylvanica*
Common St.John's-Wort	*Hypericum punctatum*	Bottlebrush Grass	*Elymus hystrix*
May-Apple	*Podyphyllum peltatum*	Virginia Wild Rye	*Elymus virginicus*
Bloodroot	*Sanguinaria canadensis*	Muhly	*Muhlenbergia sylvatica*
Bluestem Goldenrod	*Solidago caesia*	**Ferns**	
Early Goldenrod	*Solidago juncea*	Braken Fern	*Pteridium aquilinum*
Hairy Goldenrod	*Solidago hispida*		
Downy Yellow Violet	*Viola pubescens*	**Flowering Plants Continued**	
Woolly Blue Violet	*Viola sororia*	Thin-leaved Sunflower	*Helianthus decapetalus*
Wild Columbine	*Aqualegia canadensis*	Hairy Bush-clover	*Lespedeza hirta*
Woodland Sunflower	*Helianthus divaricatus*	American Hog-peanut	*Amphicarpaea bracteata*
Wood Lily	*Lilium philadelpicum*	Early Meadowrue	*Thalictrum dioicum*
Giant Solomon's Seal	*Polygonatum biflorum*	Smooth Goldenrod	*Solidago gigantea*
Early Buttercup	*Rannunclulus fascicularis*	Lopseed	*Phryma leptostachya*
Wood Anemone	*Anemone quinquefolia*	Starflower False Solomon's seal	*Maianthemum stellatum*
Poke Milkweed	*Asclipias exaltata*	Wild-lily-of-the-valley	*Maianthemum racemosum*
Tall Bellflower	*Campanula americana*	Wild Crane's-bill	*Geranium maculatum*
Bare-stemmed Tick –trefoil	*Desmodium nudiflorum*	Large Tick-trefoil	*Desmdium glutinosum*
Narrow-leaf Tick-trefoil	*Desmodium paniculatum*	Canada Honewort	*Cryptotaenia canadensis*
Northern Bedstraw	*Galium boreale*	Arrow-leaved Aster	*Aster urophyllus*
Wild Licorice	*Galium circaezans*	Heart-leaved Aster	*Aster cordifolious*
Early Buttercup	*Ranunculus fascicularis*	Round lobed Hepatica	*Anemone americana*
Wand Bush-clover	*Lespedeza intermedia*	Hoary Mountain Mind	*Pycnanthemum incanum*

Source of Suitable speices for Oak Woodland restoration: (Buck, G. Undated).

APPENDIX III

TEXT ADDED TO SITE PLAN NOTES REGARDING THE WOODLAND RESTORATION PLAN (JANUARY 2026)

WOODLAND RESTORATION PLAN - DANCE ENVIRONMENTAL - JANUARY 2026

THE DOCUMENT "WOODLAND RESTORATION AND REHABILITATION PLAN FOR THE PROPOSED HARRINGTON PIT (JANUARY 2026)" HAS BEEN PREPARED BY DANCE ENVIRONMENTAL INC. AND SHALL BE USED IN CONJUNCTION WITH THE SITE PLAN RECOMMENDATIONS TO GUIDE THE WOODLAND RESTORATION.

DOCUMENTATION OF EXISTING FOREST CONDITIONS:

a) A FOREST INVENTORY SHALL BE UNDERTAKEN BY A QUALIFIED PERSON TO FURTHER DOCUMENT IN DETAIL THE EXISTING CONDITIONS IN EACH PHASE OF TREE REMOVAL, IN THE YEAR PRIOR TO ANY CLEARING OCCURRING TO ALLOW FOR EXTRACTION.

b) THE DEPTHS OF SOILS WITHIN EACH RESTORATION AREA SHALL BE CONFIRMED PRIOR TO CLEARING.

SOILS

a) MULTIPLE LOCATIONS THROUGHOUT EACH AREA FOR TREE REMOVAL SHALL BE USED TO IDENTIFY AND DOCUMENT THE SOIL HORIZON PROFILE FOR THE AREA, TO DETERMINE AND TO GUIDE THE MACHINE OPERATORS WHEN REMOVING SOILS FROM THE CLEARED FOREST.

DETAILED RESTORATION PRESCRIPTION DEVELOPMENT

1. THE RESTORATION PRESCRIPTIONS FOR EACH PHASE, PREPARED BY A QUALIFIED PERSON, SHALL BE PREPARED PRIOR TO STARTING RESTORATION OF A GIVEN PHASE. THE CONTENT OF THE PRESCRIPTION DETAILS OF EACH PHASE OF RESTORATION ARE PROVIDED IN SECTION 5.0 OF THE WOODLAND RESTORATION AND REHABILITATION PLAN (JANUARY 2026).
2. PRIOR TO RESTORING WOODLAND SOILS, AND ANY PLANTING OCCURRING, THE EASTERN EDGE OF THE RESTORATION AREA SHALL BE SURVEYED AND STAKED ACCORDING TO THE LIMITS OF THE HISTORICAL WOODLAND EDGE. THIS SHALL DEFINE THE LIMITS OF WHERE ACTIVE RESTORATION IS TO OCCUR.
3. A 10m WIDE UNDISTURBED BUFFER SHALL BE ESTABLISHED BETWEEN THE EASTERN RESTORED WOODLAND EDGE AND THE WESTERN AGRICULTURAL FIELD EDGE. THIS 10m WIDE BUFFER AREA SHALL BE SEEDED WITH MTO ROADSIDE SEED MIX OR SIMILAR, AS AVAILABLE.

INVASIVE SPECIES CONTROL

1. MEASURES TO ELIMINATE INVASIVE SPECIES SHALL BEGIN PRIOR TO REMOVAL OF ANY FOREST SOILS IN A GIVEN PHASE. THE DETAILS OF HOW SIGNIFICANT AREAS OF INVASIVE SPECIES WILL BE IDENTIFIED AND METHODS OF CONTROL ARE PROVIDED IN WITHIN SECTION 6.0 OF THE WOODLAND RESTORATION AND REHABILITATION PLAN (JANUARY 2026).

WOODLAND MATERIAL SALVAGE, STORAGE

2. PRIOR TO TREE REMOVAL, MULTIPLE LOCATIONS THROUGHOUT THE PHASE AREA SHALL BE USED TO IDENTIFY AND DOCUMENT THE SOIL HORIZON PROFILE FOR THE AREA, TO DETERMINE AND TO GUIDE THE MACHINE OPERATORS WHEN REMOVING SOILS FROM THE CLEARED WOODLAND. THIS WILL BE UNDERTAKEN FOR ALL PHASES OF TREE REMOVAL (PHASE 1, 2A, 2B, AND 3).

3. POST TREE REMOVAL, THE SOIL HORIZONS SHALL BE SEPARATED DURING HANDLING
AND RELOCATION TO ENSURE SOILS OF THE 'A HORIZON' ARE KEPT IN THEIR OWN SEPARATE STOCKPILES, LABELED BY SOIL TYPE. LOWER SOIL HORIZONS (ROOT ZONE SOILS) ARE TO BE KEPT IN THEIR OWN LABELED STOCKPILES OF THE SAME DIMENSIONS.
4. ALL WOODLAND SOILS STORED WILL BE IN FLAT STOCKPILE AREAS OF 50X50 m IN SIZE AT MAXIMUM, AND AT A DEPTH OF <50 cm MAXIMUM. THIS SAME APPROACH WILL BE USED FOR EACH PHASE OF TREE REMOVAL (PHASE 1, 2A, 2B, AND 3).
5. SEPARATE MATERIALS REMOVED FROM CLEARED WOODLAND INTO THEIR LAYERS, WITH DIFFERENT STOCKPILES FOR ROOT ZONE SOILS, MINERAL SOIL (A HORIZON AND LEAF LITTER), AND WOODY DEBRIS (BRANCHES, TRUNKS, WOOD CHIPS ETC.)/LEAF LITTER.
6. THE QUALIFIED PERSON SUPERVISING THE WOODLAND SOIL REMOVAL WILL IDENTIFY TO THE MACHINE OPERATOR(S) WHICH TREE & SHRUB STUMP/ROOT MASSES WITHIN THE CLEARED AREA ARE TO BE DUG OUT WITH SOILS INTACT AND PLACED WITHIN THE ‘A HORIZON’ WOODLAND SOIL LAYER STORAGE AREA.
7. WOOD DEBRIS (BRANCHES, TRUNKS, WOOD CHIPS ETC.) FROM TREE CLEARING SHALL BE STORED IN A SUITABLE TEMPORARY STORAGE AREA IN PILES AND WILL BE RETURNED BACK TO THE RESTORATION AREA ONCE EXTRACTION IS COMPLETED AND SLOPES (3:1) ARE ESTABLISHED.
8. THE WOODLAND SOILS SHALL BE STORED FOR NO GREATER THAN 20 MONTHS FROM THE TIME OF SOIL REMOVAL.
9. WOODCHIPS MADE FROM TREE AND SHRUB BRANCHES FROM THE TREE CLEARING OF THE SAME PHASE AS SOILS ARE REMOVED WILL BE SCATTERED OVER <60% OF THE UPPER WOODLAND SOIL STRATA LAYER STOCKPILE.
10. STOCKPILING OF WOODLAND SOILS IS TO BE KEPT SEPARATE FROM OTHER TOPSOIL STOCKPILES ON-SITE, AND THE RE-APPLICATION OF THE SOIL LAYERS TO THE PROPOSED WOODLAND RESTORATION AREAS SHALL BE OVERSEEN BY A QUALIFIED PERSON.
11. THE ABOVE NOTED PROCEDURES WILL BE USED FOR EACH PHASE OF TREE REMOVAL BUT WILL REMAIN FLEXIBLE TO THE DEVELOPMENT OF BMPS BASED ON THE RESULTS FROM PRECEDING RESTORATION PHASES.

PLANT SALVAGE FROM EXTRACTION AREA IN SIGNIFICANT WOODLAND
1. PRIOR TO TREE CLEARING AND SOIL STRIPPING IN EACH PHASE FOLLOWING PHASE 1, SUITABLE NATIVE PLANTS WILL BE TRANSPLANTED TO THE PHASE UNDERGOING RESTORATION, FOLLOWING THE SAME APPROACH IDENTIFIED ABOVE. THIS APPROACH SHALL BE FOLLOWED FOR RESTORATION PHASES 2A, 2B, AND 3.

RESTORATION APPROACH
THE RETURN OF SOILS IN RESTORATION PHASES 1, 2, AND 3 SHALL BE UNDERTAKEN IN THE FOLLOWING MANNER:
1. AREAS ON THE PIT FLOOR SHALL BE RIPPED TO ELIMINATE COMPACTION OF SOILS, IN THE SAME MANNER USED TO RETURN NON-RESTORATION AREAS OF THE PIT FLOOR BACK TO AGRICULTURE.

2. A LAYER OF TOPSOIL FROM THE SITE SHALL BE PLACED OVER THE PREPARED PIT FLOOR AND 3:1 SLOPES OF THE AREA FOR RESTORATION.
3. LOCATIONS OF THE PLANTING NODES SHALL BE MARKED BY THE QUALIFIED PERSON COMPLETING THE RESTORATION USING STAKES.
4. THE STORED WOODLAND SOILS SHALL BE PLACED WITHIN THE AREA MARKED AS A PLANTING NODE, IN THE PROPER SOIL PROFILE LAYERS AS THEY WERE REMOVED, AND AN AREA 1-2m OUTSIDE OF THE PLANTING NODE CAN ALSO RECEIVE THESE SOILS.
5. LEAF-LITTER AND SMALL WOOD DEBRIS SAVED FOR RESTORATION SHALL THEN BE PLACED WITHIN THE PLANTING NODES.
6. STEPS 2-5 SHALL BE UNDERTAKEN PROGESSIVELY IN STAGES MOVING FROM WEST TO EAST TO REDUCE COMPACTION OF THE SOILS, LEAF-LITTER ETC., AND TO AVOID EQUIPMENT ENTERING PLANTING NODE AREAS.
7. THE STORED WOODY DEBRIS (TREE/SHRUB TOPS) MEDIUM TO LARGER IN SIZE SHALL BE PLACED ON THE OUTER EDGES OF PLANTING NODES OR INSIDE, TO HELP ACT AS A DETERENT TO DEER. LARGER LOGS SHALL BE PLACED UPSLOPE OF PLANTING NODES ON THE 3:1 SLOPE AREA TO HELP REDUCE EROSION, WHILE PLANTS ARE ESTABLISHING.
8. TREES, SHRUBS, AND HERBACEOUS SPECIES SHALL BE PLANTED IN EACH PHASE AS DETAILED IN THE WOODLAND RESTORATION AND REHABILITATION PLAN FOR EACH PHASE.
9. AREAS WITHOUT TREE, SHRUB OR HERBACEOUS SPECIES PLANTINGS/GROWTH OR WOOD DEBRIS SHALL BE SEEDED BY HAND OVER AN APPROXIMATE 10 m RADIUS AROUND EACH PLANTING NODE USING THE FOLLOWING ST. WILLIAMS NURSERY AND ECOLOGY CENTRE SEED MIXES (AS AVAILABLE): POLLINATOR HABITAT-DRY MEADOW SEED MIX
10. ANY OPENINGS OF BARE SOILS OUTSIDE OF THE RESTORATION PLANTING NODE AND 10m RADIUS OF NATIVE SEED MIX, WILL BE PLANTED WITH THE MTO ROADSIDE MIX OF GRASSES AND LEGUMES (AS AVAILABLE) (IE. FROM GENERAL SEED COMPANY).
11. THE QUALIFIED PERSON COMPLETING THE RESTORATION WILL PREPARE MAPPING OF PHASE 2A, 2B AND 3 PRIOR TO THE TREE REMOVAL AT EACH PHASE, INFORMED BY THE PREVIOUS PHASE(S) OUTCOMES.
12. ALL PLANTINGS AND SEEDING SHALL OCCUR IN EARLY SPRING TO ENSURE PROPER ESTABLISHMENT AND TIME TO EVALUATE SURVIVABILITY OF ALL PLANTINGS AND THE SUCCESS OF THE GRASS/WILDFLOWER SEEDING.
13. EACH PHASE OF TREE REMOVAL WILL HAVE 4 BAT HOUSES INSTALLED DURING RESTORATION, RESULTING IN 16 BAT HOUSES IN THE 4HA WHERE TREE REMOVAL WILL OCCUR, PLUS 4 BAT HOUSES LOCATED IN THE NORTHWEST CORNER OF THE LICENCE AREA, RESULTING IN A TOTAL OF 20 BAT HOUSE ALONG THE WEST LICENCE EDGE. DETAILS OF BAT HOUSE TYPE, INSTALLATION, LOCATIONS, TIMING OF INSTALL, AND MONITORING ARE PROVIDED IN THE OVERALL BENEFIT PERMIT FOR SAR BATS.

MONITORING, MAINTENANCE AND REPORTING

1. MONITORING AND REPORTING SHALL BE UNDERTAKEN BY A QUALIFIED PERSON.
2. PRIOR TO TREE REMOVAL IN THE NEXT PHASE, 6 OF 10 PLANTING NODES WILL BE RANDOMLY SELECTED FOR MONITORING WITHIN THE PHASE BEING ASSESSED FOR SURVIVABILITY. ANNUAL MONITORING OF EACH RESTORATION PHASE SHALL BEGIN AFTER PLANTINGS IN THE PLANTING

NODES ARE INSTALLED, AND ALL SEEDING IS COMPLETED (THIS INCLUDES BOTH THE POLLINATOR SEED MIX AND MTO ROADSIDE SEED MIX) AND SHALL CONTINUE IN EACH PHASE UNTIL THE QUALIFIED PERSON DOCUMENTS THAT AT LEAST 80% OF SPECIES ESTABLISHED IN THE ASSESSED PLANTING NODES HAVE REACHED THE FREE-TO-GROW STAGE, AND GROUNDCOVER IN EACH PHASE HAS BEEN ESTABLISHED. THIS WILL CONFIRM THAT NO LARGE BARREN PATCHES ARE PRESENT WHERE THE SEED DID NOT TAKE HOLD. ANY AREAS >10x10m WITHOUT EVIDENCE OF THE POLLINATOR SEED MIX SPECIES PRESENT SHALL BE RESEEDED UNTIL THE VEGETATION IS ESTABLISHED.

3. MONITORING SHALL OCCUR THROUGHOUT THE GROWING SEASON TO ENSURE PLANTINGS ARE RECEIVING ENOUGH WATER ETC. AND TO ASSESS THE CONDITION OF PLANTING. MEMOS SHALL BE PREPARED FOR THE CLIENT DESCRIBING RESULTS, ISSUES AND SOLUTIONS DURING THE TENDING PERIOD. WATERING SHALL OCCUR AS NEEDED.
4. PHOTO MONITORING LOCATIONS SHALL BE SELECTED WITHIN EACH RESTORATION PHASE. LOCATIONS SHALL BE MARKED WITH A WOOD STAKE OR STEEL T-BAR TO STANDARDIZE PHOTO LOCATIONS, AND ALL CARDINAL DIRECTIONS WILL BE PHOTOGRAPHED ANNUALLY AROUND SIMILAR DATES AND TIMES OF YEAR TO ALLOW FOR COMPARISON OVER TIME.
5. ONCE THE FREE-TO-GROW STAGE IS REACHED MONITORING WILL OCCUR EVERY 5 YEARS UNTIL 85% OF OAK TREES WITHIN THE PLANTING NODES HAVE REACHED A 4 INCH DBH, AND THE TARGET OAK WOODLAND IS CONFIRMED TO BE ESTABLISHED.
6. IF THE MONITORING IDENTIFIES THAT PLANTINGS HAVE FAILED TO ESTABLISH, THEN RECOMMENDATIONS ARE TO BE MADE FOR EACH PLANTING NODE LOCATION, INDICATING SPECIES AND NUMBERS OF INDIVIDUALS THAT NEED TO BE REPLACED.