



LEGEND

	BOUNDARY OF AREA TO BE LICENCED		EXISTING 5m CONTOUR LINE
	BOUNDARY OF LICENCED AREA		EXISTING 1m CONTOUR LINE
	REGULATORY SETBACK LINE		EXISTING SPOT ELEVATION
	120m BOUNDARY LINE		PROPOSED 5m CONTOUR LINE
	LOT/CONCESSION LINE		PROPOSED 1m CONTOUR LINE
	PROVINCIAL SIGNIFICANT WETLAND (MNRFP MAPPING - 2003)		DIRECTION OF SURFACE WATER DRAINAGE
	LIMIT OF EXTRACTION		SMALL STREAM, AGRICULTURAL DITCH/SWALE
	SURVEYED NATURAL ENVIRONMENT OPERATIONAL LIMIT		ARCHAEOLOGICAL SITE A10x-25 (REFER TO ARCHAEOLOGICAL REPORT)
	EXISTING VEGETATION		
	PROPOSED TREE PLANTING/ PLANT RELOCATION		
	EXISTING SURFACE WATER		
	EXISTING WETLAND		
	PROPOSED WETLAND		
	PROPOSED POND		
	EXISTING FENCE		

REHABILITATION NOTES
GENERAL INFORMATION

- REFER TO SHEET 2 AND 3 OF 5 FOR SCHEMATIC OPERATIONS, SHEET 4 OF 5 FOR SECTIONS, AND SHEET 5 OF 5 FOR REHABILITATION PHASING DIAGRAMS AND NOTES FOR FINAL REHABILITATION.
- PROPERTY SHALL BE REHABILITATED TO:

LAKE	11.30 HA
MARSH	2.80 HA
NATURALIZED AREA MEADOW	6.75 HA
REFORESTATION	1.75 HA
TOTAL	22.60 HECTARES
- AREA TO REFORESTED OUTSIDE LICENCE: 2.0 HA

HYDROGEOLOGICAL INFORMATION

- GROUNDWATER LEVEL CHANGES WILL BE CONTROLLED SUCH THAT NO NEGATIVE IMPACT TO POTENTIAL RECEPTORS IS EXPECTED.
- SURFACE DRAINAGE WILL BE DIRECTED TO THE ON SITE POND AND TO WETLAND #4 AS PER NETR RECOMMENDATIONS.

SIDESLOPE AND OPEN SPACE REHABILITATION INFORMATION
GRADING INFORMATION

- REHABILITATED SLOPES WITHIN THE LICENCED AREA WILL BE CONSTRUCTED AS SHOWN ON THE CROSS SECTIONS. REHABILITATION OF ABOVE WATER SLOPES SHALL BE BY BACKFILLING (MAXIMUM 3:1) AND/OR CUT AND FILL METHOD USING AVAILABLE ON-SITE OVERBURDEN AND TOPSOIL FROM WITHIN THE LICENCED AREA. AVAILABLE OVERBURDEN WILL BE APPROXIMATELY 400mm THICK. REFER TO DRAWING 3 OF 5, OPERATIONS PLAN B-G, FOR MORE INFORMATION ON BACKFILLING AND CREATION OF REHABILITATED SIDESLOPES.

VEGETATION STABILIZATION INFORMATION

- TOPSOIL SHALL BE SEEDED WITH A MIXTURE THAT MAY INCLUDE THE FOLLOWING AT A RATE OF APPROXIMATELY 120KG/HA:

BUCKWHEAT	RED CLOVER	WHITE CLOVER
TALL FESCUE	ANNUAL RYE	COMMON MILKWEED
WILD BERGAMOT	BROWN EYED SUSAN	EARLY GOLDENROD
NEW ENGLAND ASTER	COMMON EVENING PRIMROSE	

OPEN WATER POND REHABILITATION INFORMATION

- THE AVERAGE WATER LEVEL IN THE POST-EXTRACTION LAKE IS ESTIMATED TO BE 406-407m ASL BASED ON GROUNDWATER SCIENCE HYDROGEOLOGICAL REPORT DATED OCTOBER 2017.
- THE SHAPE AND GRADING OF THE PROPOSED POND IS APPROXIMATE, BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME OF LICENSING. ACTUAL EXTRACTION WILL FOLLOW THE BELOW WATER DEPENDING AND REHABILITATION SHALL FOLLOW THE CONCEPT ILLUSTRATED.

REHABILITATION NOTES (CONTINUED)
POND REHABILITATION INFORMATION

- RESTORATION OF THE POND WILL GENERALLY BE ACCOMPLISHED AS FOLLOWS:
 - EXTRACTION AND ROUGH GRADING WILL CREATE A NEARSHORE SHORELINE AREA AT A SLOPE OF 10:1.
 - UNDERWATER SLOPES (MAXIMUM 2:1) WILL BE FORMED WITH ON-SITE FILL.
 - THE PIT FLOOR SHALL BE LEFT IRREGULAR AND THE EDGES SHALL BE SCULPTED TO LENGTHEN THE SHORELINE FOR THE PURPOSE OF ENHANCING BIOLOGICAL DIVERSITY AND PRODUCTIVITY.
 - WOODY DEBRIS, BRANCHES, TREE TRUNKS, STUMPS, ETC. CLEARED IN THE EXTRACTION PROCESS WILL BE SALVAGED WHERE POSSIBLE, FOR USE IN SHORELINE RESTORATION/ UNDERWATER HABITAT ENHANCEMENT.
 - STUMPS, LOGS, BRUSH BUNDLES, ETC. SHALL BE INSTALLED 430m O.C. ALONG THE SHORELINE IN THE SHALLOW ZONE TO CREATE PHYSICAL DIVERSITY.
 - OVERSIZE ROCKS NOT UTILIZED IN THE AGGREGATE OPERATIONS WILL ALSO BE PLACED IN THE SHALLOW ZONE TO CREATE PHYSICAL DIVERSITY.
 - SHORELINE WILL BE SPORADICALLY NATURALIZED WITH WOODY PLANT SPECIES. SPECIES MAY INCLUDE THE FOLLOWING NATIVE PLANTS:

RED MAPLE	PUSSY WILLOW	SILVER MAPLE	RED OSIER DOGWOOD
WHITE PINE	SPECKLED ALDER	WHITE CEDAR	WHITE SPRUCE
- INITIAL SHORELINE AREAS SHALL BE PLANTED WITH CLUMPS OF EMERGENT AND SUBMERGENT NATIVE WETLAND PLANTS TO INITIATE COLONIZATION OF THE SITE AS NUTRIENT LEVELS INCREASE TO SUPPORT THEM. NATIVE WETLAND PLANTS SUCH AS:

FLOATING PONDWEED	COONTAIL	SOFT STEMMED BULRUSH
RIVER BULRUSH	PICKERELWEED	BROAD-LEAVED ARROWHEAD

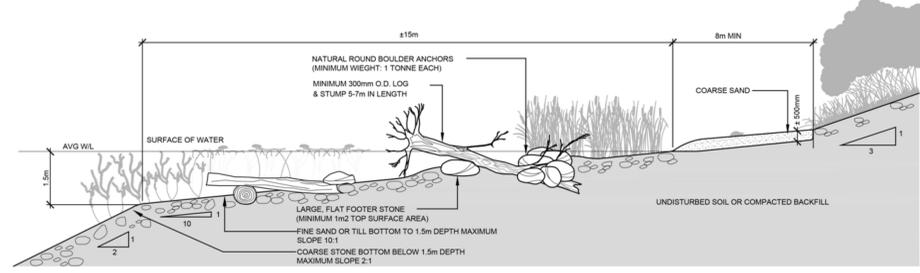
 WILL BE PLANTED IN CLUSTERS OF 5 AT APPROPRIATE DEPTHS TO BEGIN THE COLONIZATION. MAINTAIN ALL VEGETATION IN A HEALTHY AND VIGOROUS GROWING CONDITION.

- REFORESTATION REHABILITATION INFORMATION**
- UPLAND AREAS SHALL BE REFORESTED, WHERE SHOWN, AS FOLLOWS:

WHITE PINE	SILVER MAPLE	BUR OAK	RED CHOCHEBERRY
RED PINE	SUGAR MAPLE	RED OAK	COMMON ELDERBERRY
WHITE SPRUCE	RED MAPLE	GREY DOGWOOD	WHITE CEDAR
PAPER BIRCH	CHOCHEBERRY	NANNEYBERRY	STAGHORN SUMAC
BASWOOD	TREMBLING ASPEN	HYBRID POPLAR	EASTERN COTTONWOOD

- SETBACK REHABILITATION INFORMATION**
- AFTER SIDESLOPES ARE CREATED AND REQUIRED BERMS ARE REMOVED FROM SETBACKS ADJACENT TO HEART LAKE ROAD THESE AREAS WILL BE IMMEDIATELY STABILIZED WITH A SUITABLE GROUND COVER AND THEN REFORESTED THE FOLLOWING SPRING. SETBACK AREAS PROPOSED FOR REFORESTATION AND DEVOID OF BERMS WILL BE PLANTED WITHIN TWO YEARS OF LICENCE ISSUANCE.

NO.	DATE	REVISIONS	OWNER	HAH	MAH	NO.	DATE	REVISIONS	OWNER	HAH	MAH



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Project Name
McCORMICK PIT
PART OF LOT 12, CONCESSION 2 EHS
TOWN OF CALEDON, PEEL REGION
LICENCE No. _____
APPLICANT SIGNATURE _____

Scale 1:2000	North	Stamp
Drawing Status SUBMITTED TO MNRF FOR REVIEW		
Drawn S.B.	Checked G.D.H./M.H.	Issue Date JAN 2018
Drawing Title REHABILITATION PLAN	Project Number 02-48	Drawing Number 5 OF 5