RU RURAL

LSR LIMITED SERVICES RURAL

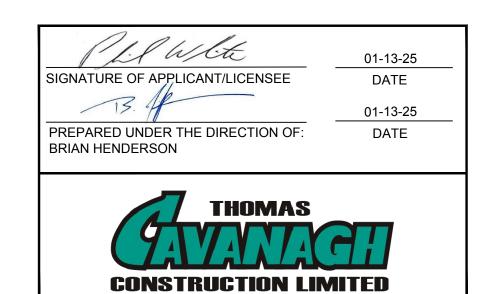
MAR-h MINERAL AGGREGATE RESOURCES RESERVE

MXP MINERAL AGGREGATE RESOURCES PIT

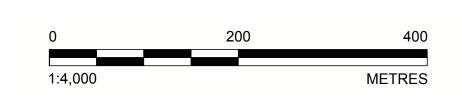
ZONES WITH AN "h" FOLLOWING THE ZONE SYMBOL (e.g. MAR-h) ILLUSTRATES PROPERTIES WHICH HAVE BEEN PLACED IN A HOLDING ZONE.

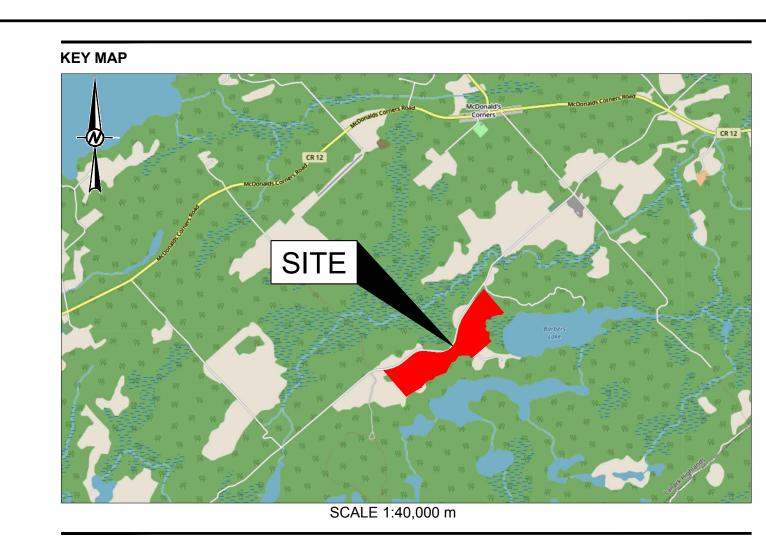


EXISTING FEATURES - GENERAL SCALE 1:4,000 m



AMENDMENTS		DATE	APPROVAL DATE
SITE PLANS APPROVED BY THE MINISTRY O	F NATURAL RESC	URCES AND	FORESTRY.
SIGNATURE			DATE





HIGHLAND LINE PIT

LOT 5, CONCESSION 10
GEOGRAPHIC TOWNSHIP OF DALHOUSIE

TOWNSHIP OF LANARK HIGHLANDS, LANARK COUNTY, ONTARIO

APPLICANT: THOMAS CAVANAGH CONSTRUCTION LIMITED 9094 CAVANAGH ROAD

PIT LICENCE NO. 626599

NOTE(S)

- 1. LICENCED AREA, HIGHLAND LINE PIT 37.6 HECTARES.
- AREA OF OPERATION, HIGHLAND LINE PIT <u>28.4</u> HECTARES.
 THIS SITE PLAN IS PEPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENCE FOR A PIT BELOW THE GROUND WATER TABLE.
- 4. THIS PLAN WAS PREPARED USING PHOTOGRAMMETRIC METHODS FROM AERIAL
- PHOTOGRAPHS.
 5. LOT, CONCESSION AND BOUNDARY LINES ON THIS PLAN ARE APPROXIMATE.
- THIS IS NOT A LEGAL SURVEY DRAWING IN ACCORDANCE WITH THE PROVINCE OF ONTARIO SURVEYORS ACT 1987. THIS DRAWING WAS PRODUCED USING STANDARD PHOTOGRAMMETRIC PRACTICES.

FGEND

BOUNDARY OF AREA TO BE LICENCED

ASHTON, ONTARIO

KOA 1B0

BOREHOLE / MONITORING WELL

BOREHOLE / MONITORING WELL

PRIVATE WELL (AS PER MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS WATER WELL INFORMATION SYSTEM)

CON 10, LOT 5 CON 10, LOT 4 LOTS AND CONCESSION LINES

MAR-h LAND ZONING BY-LAW

— — — — — 120-METRE SURROUND

— — — ADJACENT PIT AND QUARRY BOUNDARY

UTILITY POLE

BUILDING; S-SILO, H-HOUSE, G-GARAGE, B-BARN, S-SHED, O-OFFICE, SC-SCALE HOUSE

---- ROAD: PAVED

----- ROAD: GRAVEL

CONTOURS/INDEX CONTOURS

O.O.O.O.O.C WOODED AREA

WATERCOURSE

WETLAND

x — X PAGE WIRE FENCE/GATE

ENTRANCE EXIT

REFERENCE(S)

- KEY PLAN: Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community.
- 2. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2016
- PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: UTM ZONE 18, VERTICAL DATUM: CGVD28

EXISTING FEATURES - GENERAL NOTES (PAGE 1 OF 5)

NOTE: THE NUMBERS BELOW REFER TO AGGREGATE RESOURCES OF ONTARIO: SITE PLAN STANDARDS (AUGUST 2020)

16 EXISTING ZONING THE EXISTING ZONING O

THE EXISTING ZONING OF LAND ON AND WITHIN 120 METRES OF THE SITE IS SHOWN ON THIS PLAN (PAGE 1 OF 5).

CLIEN

B.J. HENDERSON

THOMAS CAVANAGH CONSTRUCTION LIMITED

HIGHLAND LINE PIT

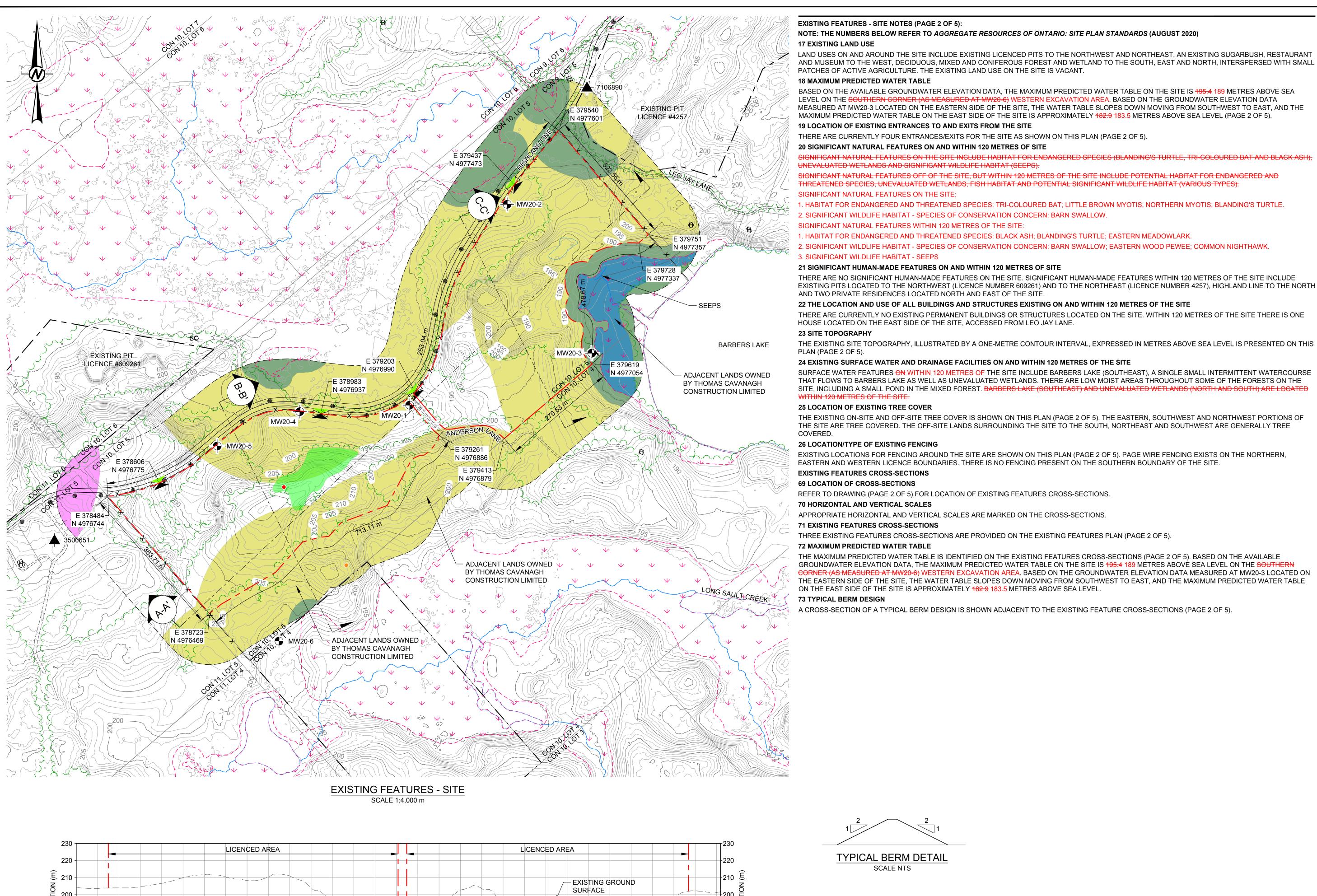
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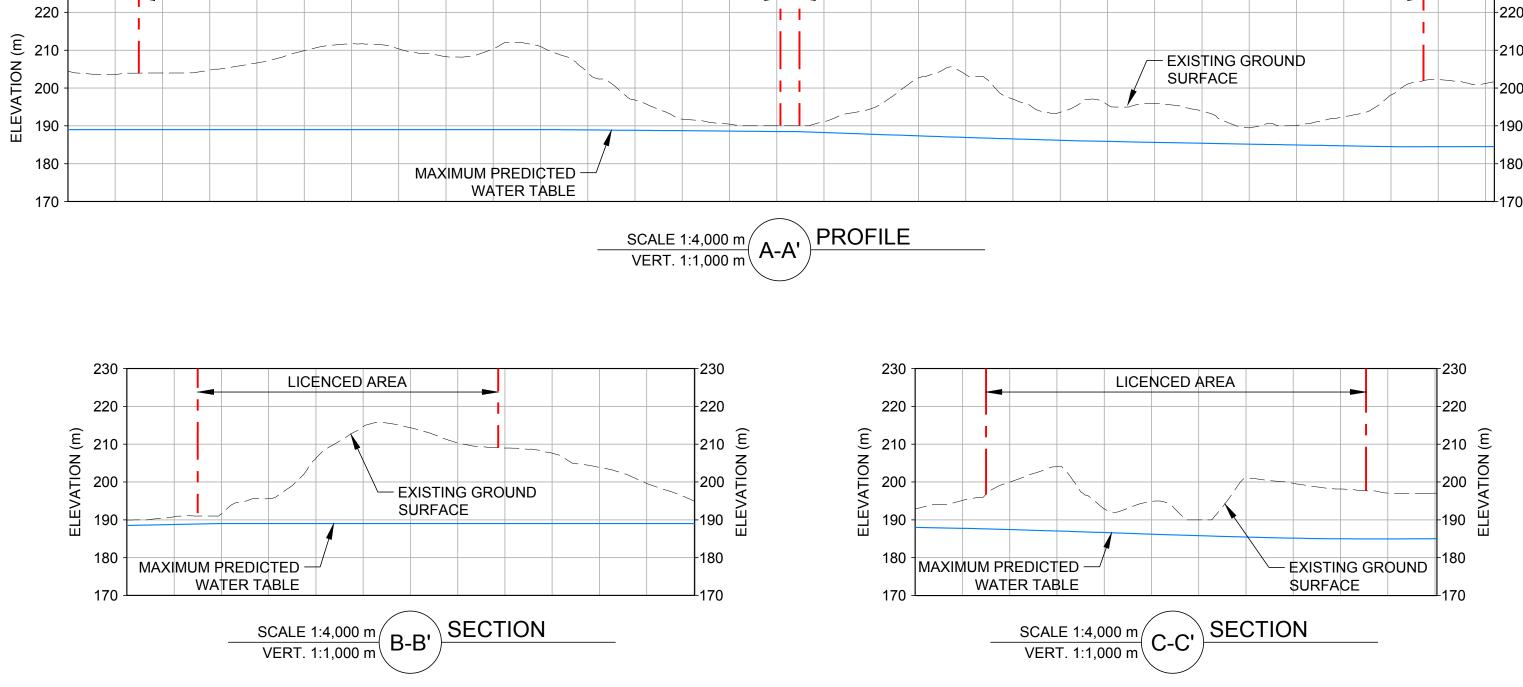
EXISTING FEATURES - GENERAL



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	REVIEWED	KAM	
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PROJECT NO. CONTROL REV. DRAWING 19126620 0014 1 1 OF 5





EXISTING FEATURES - SITE NOTES (PAGE 2 OF 5):

NOTE: THE NUMBERS BELOW REFER TO AGGREGATE RESOURCES OF ONTARIO: SITE PLAN STANDARDS (AUGUST 2020)

17 EXISTING LAND USE

LAND USES ON AND AROUND THE SITE INCLUDE EXISTING LICENCED PITS TO THE NORTHWEST AND NORTHEAST, AN EXISTING SUGARBUSH, RESTAURANT AND MUSEUM TO THE WEST, DECIDUOUS, MIXED AND CONIFEROUS FOREST AND WETLAND TO THE SOUTH, EAST AND NORTH, INTERSPERSED WITH SMALL PATCHES OF ACTIVE AGRICULTURE. THE EXISTING LAND USE ON THE SITE IS VACANT.

18 MAXIMUM PREDICTED WATER TABLE BASED ON THE AVAILABLE GROUNDWATER ELEVATION DATA, THE MAXIMUM PREDICTED WATER TABLE ON THE SITE IS 195.4 189 METRES ABOVE SEA

LEVEL ON THE SOUTHERN CORNER (AS MEASURED AT MW20-6) WESTERN EXCAVATION AREA. BASED ON THE GROUNDWATER ELEVATION DATA MEASURED AT MW20-3 LOCATED ON THE EASTERN SIDE OF THE SITE, THE WATER TABLE SLOPES DOWN MOVING FROM SOUTHWEST TO EAST, AND THE

MAXIMUM PREDICTED WATER TABLE ON THE EAST SIDE OF THE SITE IS APPROXIMATELY 182.9 183.5 METRES ABOVE SEA LEVEL (PAGE 2 OF 5).

19 LOCATION OF EXISTING ENTRANCES TO AND EXITS FROM THE SITE THERE ARE CURRENTLY FOUR ENTRANCES/EXITS FOR THE SITE AS SHOWN ON THIS PLAN (PAGE 2 OF 5).

20 SIGNIFICANT NATURAL FEATURES ON AND WITHIN 120 METRES OF SITE

SIGNIFICANT NATURAL FEATURES ON THE SITE INCLUDE HABITAT FOR ENDANGERED SPECIES (BLANDING'S TURTLE, TRI-COLOURED BAT AND BLACK ASH), UNEVALUATED WETLANDS AND SIGNIFICANT WILDLIFE HABITAT (SEEPS).

SIGNIFICANT NATURAL FEATURES OFF OF THE SITE, BUT WITHIN 120 METRES OF THE SITE INCLUDE POTENTIAL HABITAT FOR ENDANGERED AND

THREATENED SPECIES, UNEVALUATED WETLANDS, FISH HABITAT AND POTENTIAL SIGNIFICANT WILDLIFE HABITAT (VARIOUS TYPES). SIGNIFICANT NATURAL FEATURES ON THE SITE:

I. HABITAT FOR ENDANGERED AND THREATENED SPECIES: TRI-COLOURED BAT; LITTLE BROWN MYOTIS; NORTHERN MYOTIS; BLANDING'S TURTLE SIGNIFICANT WILDLIFE HABITAT - SPECIES OF CONSERVATION CONCERN: BARN SWALLOW.

SIGNIFICANT NATURAL FEATURES WITHIN 120 METRES OF THE SITE:

1. HABITAT FOR ENDANGERED AND THREATENED SPECIES: BLACK ASH; BLANDING'S TURTLE; EASTERN MEADOWLARK. 2. SIGNIFICANT WILDLIFE HABITAT - SPECIES OF CONSERVATION CONCERN: BARN SWALLOW; EASTERN WOOD PEWEE; COMMON NIGHTHAWK.

3. SIGNIFICANT WILDLIFE HABITAT - SEEPS

21 SIGNIFICANT HUMAN-MADE FEATURES ON AND WITHIN 120 METRES OF SITE THERE ARE NO SIGNIFICANT HUMAN-MADE FEATURES ON THE SITE. SIGNIFICANT HUMAN-MADE FEATURES WITHIN 120 METRES OF THE SITE INCLUDE

AND TWO PRIVATE RESIDENCES LOCATED NORTH AND EAST OF THE SITE.

22 THE LOCATION AND USE OF ALL BUILDINGS AND STRUCTURES EXISTING ON AND WITHIN 120 METRES OF THE SITE THERE ARE CURRENTLY NO EXISTING PERMANENT BUILDINGS OR STRUCTURES LOCATED ON THE SITE. WITHIN 120 METRES OF THE SITE THERE IS ONE HOUSE LOCATED ON THE EAST SIDE OF THE SITE, ACCESSED FROM LEO JAY LANE.

THE EXISTING SITE TOPOGRAPHY, ILLUSTRATED BY A ONE-METRE CONTOUR INTERVAL, EXPRESSED IN METRES ABOVE SEA LEVEL IS PRESENTED ON THIS

PLAN (PAGE 2 OF 5).

24 EXISTING SURFACE WATER AND DRAINAGE FACILITIES ON AND WITHIN 120 METRES OF THE SITE SURFACE WATER FEATURES ON WITHIN 120 METRES OF THE SITE INCLUDE BARBERS LAKE (SOUTHEAST), A SINGLE SMALL INTERMITTENT WATERCOURSE THAT FLOWS TO BARBERS LAKE AS WELL AS UNEVALUATED WETLANDS. THERE ARE LOW MOIST AREAS THROUGHOUT SOME OF THE FORESTS ON THE SITE, INCLUDING A SMALL POND IN THE MIXED FOREST. BARBERS LAKE (SOUTHEAST) AND UNEVALUATED WETLANDS (NORTH AND SOUTH) ARE LOCATED

WITHIN 120 METRES OF THE SITE.

25 LOCATION OF EXISTING TREE COVER THE EXISTING ON-SITE AND OFF-SITE TREE COVER IS SHOWN ON THIS PLAN (PAGE 2 OF 5). THE EASTERN, SOUTHWEST AND NORTHWEST PORTIONS OF THE SITE ARE TREE COVERED. THE OFF-SITE LANDS SURROUNDING THE SITE TO THE SOUTH, NORTHEAST AND SOUTHWEST ARE GENERALLY TREE

26 LOCATION/TYPE OF EXISTING FENCING EXISTING LOCATIONS FOR FENCING AROUND THE SITE ARE SHOWN ON THIS PLAN (PAGE 2 OF 5). PAGE WIRE FENCING EXISTS ON THE NORTHERN,

EASTERN AND WESTERN LICENCE BOUNDARIES. THERE IS NO FENCING PRESENT ON THE SOUTHERN BOUNDARY OF THE SITE.

69 LOCATION OF CROSS-SECTIONS

70 HORIZONTAL AND VERTICAL SCALES

APPROPRIATE HORIZONTAL AND VERTICAL SCALES ARE MARKED ON THE CROSS-SECTIONS.

71 EXISTING FEATURES CROSS-SECTIONS

72 MAXIMUM PREDICTED WATER TABLE

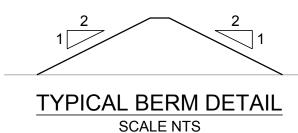
THE MAXIMUM PREDICTED WATER TABLE IS IDENTIFIED ON THE EXISTING FEATURES CROSS-SECTIONS (PAGE 2 OF 5). BASED ON THE AVAILABLE

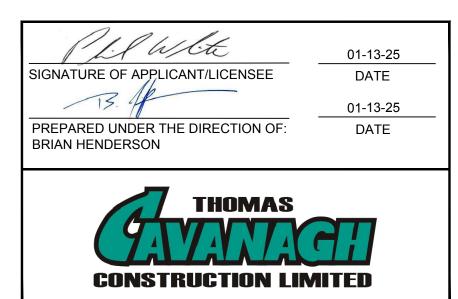
GROUNDWATER ELEVATION DATA, THE MAXIMUM PREDICTED WATER TABLE ON THE SITE IS 195.4 189 METRES ABOVE SEA LEVEL ON THE SOUTHERN ORNER (AS MEASURED AT MW20-6) WESTERN EXCAVATION AREA. BASED ON THE GROUNDWATER ELEVATION DATA MEASURED AT MW20-3 LOCATED ON THE EASTERN SIDE OF THE SITE, THE WATER TABLE SLOPES DOWN MOVING FROM SOUTHWEST TO EAST, AND THE MAXIMUM PREDICTED WATER TABLE

ON THE EAST SIDE OF THE SITE IS APPROXIMATELY 182.9 183.5 METRES ABOVE SEA LEVEL.

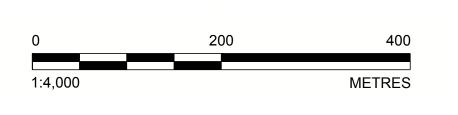
73 TYPICAL BERM DESIGN

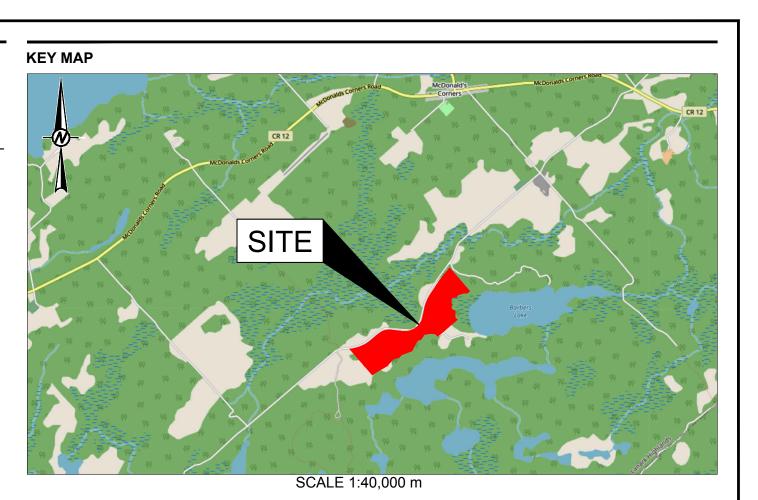
A CROSS-SECTION OF A TYPICAL BERM DESIGN IS SHOWN ADJACENT TO THE EXISTING FEATURE CROSS-SECTIONS (PAGE 2 OF 5).





AMENDMENTS		DATE	APPROVAL DAT
SITE PLANS APPROVED BY THE MINISTR	Y OF NATURAL RESC	URCES AND	FORESTRY.
SIGNATURE			DATE





HIGHLAND LINE PIT LOT 5, CONCESSION 10

GEOGRAPHIC TOWNSHIP OF DALHOUSIE TOWNSHIP OF LANARK HIGHLANDS,

LANARK COUNTY, ONTARIO

APPLICANT:

THOMAS CAVANAGH CONSTRUCTION LIMITED 9094 CAVANAGH ROAD ASHTON, ONTARIO

PIT LICENCE NO. 626599

KOA 1B0

1. LICENCED AREA, HIGHLAND LINE PIT 37.6 HECTARES.

LICENCE FOR A PIT BELOW THE GROUND WATER TABLE.

2. AREA OF OPERATION, HIGHLAND LINE PIT 28.4 HECTARES. . THIS SITE PLAN IS PEPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A

4. THIS PLAN WAS PREPARED USING PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHS.

5. LOT, CONCESSION AND BOUNDARY LINES ON THIS PLAN ARE APPROXIMATE. 6. THIS IS NOT A LEGAL SURVEY DRAWING IN ACCORDANCE WITH THE PROVINCE OF

ONTARIO SURVEYORS ACT 1987. THIS DRAWING WAS PRODUCED USING STANDARD PHOTOGRAMMETRIC PRACTICES.

LEGEND

—— — BOUNDARY OF AREA TO BE LICENCED — — — — — 120-METRE SURROUND

BOREHOLE / MONITORING WELL

PRIVATE WELL (AS PER MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS WATER WELL INFORMATION SYSTEM)

CON 10, LOT 4 LOTS AND CONCESSION LINES

— – ADJACENT PIT AND QUARRY BOUNDARY

UTILITY POLE

BUILDING; S-SILO, H-HOUSE, G-GARAGE, B-BARN, S-SHED, H O-OFFICE, SC-SCALE HOUSE

- ROAD: PAVED

·--- ROAD: GRAVEL

CONTOURS/INDEX CONTOURS

O.O.O.O.O.C WOODED AREA WATERCOURSE

____ WETLAND

X — X PAGE WIRE FENCE/GATE

POTENTIAL TRI-COLOURED BAT ROOST HABITAT

POTENTIAL TRI-COLOURED BAT MATERNITY ROOST

CATEGORY 1/2 BLANDING'S TURTLE HABITAT

CATEGORY 3 BLANDING'S TURTLE HABITAT

POTENTIAL CATEGORY 3 EASTERN MEADOWLARK HABITAT

EASTERN WOOD PEEWEE

BLACK ASH HABITAT



ENTRANCE

1. KEY PLAN: Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

2. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD.

UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS

3. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: UTM

ZONE 18, VERTICAL DATUM: CGVD28

THOMAS CAVANAGH CONSTRUCTION LIMITED

HIGHLAND LINE PIT

B. J. HENDERSON

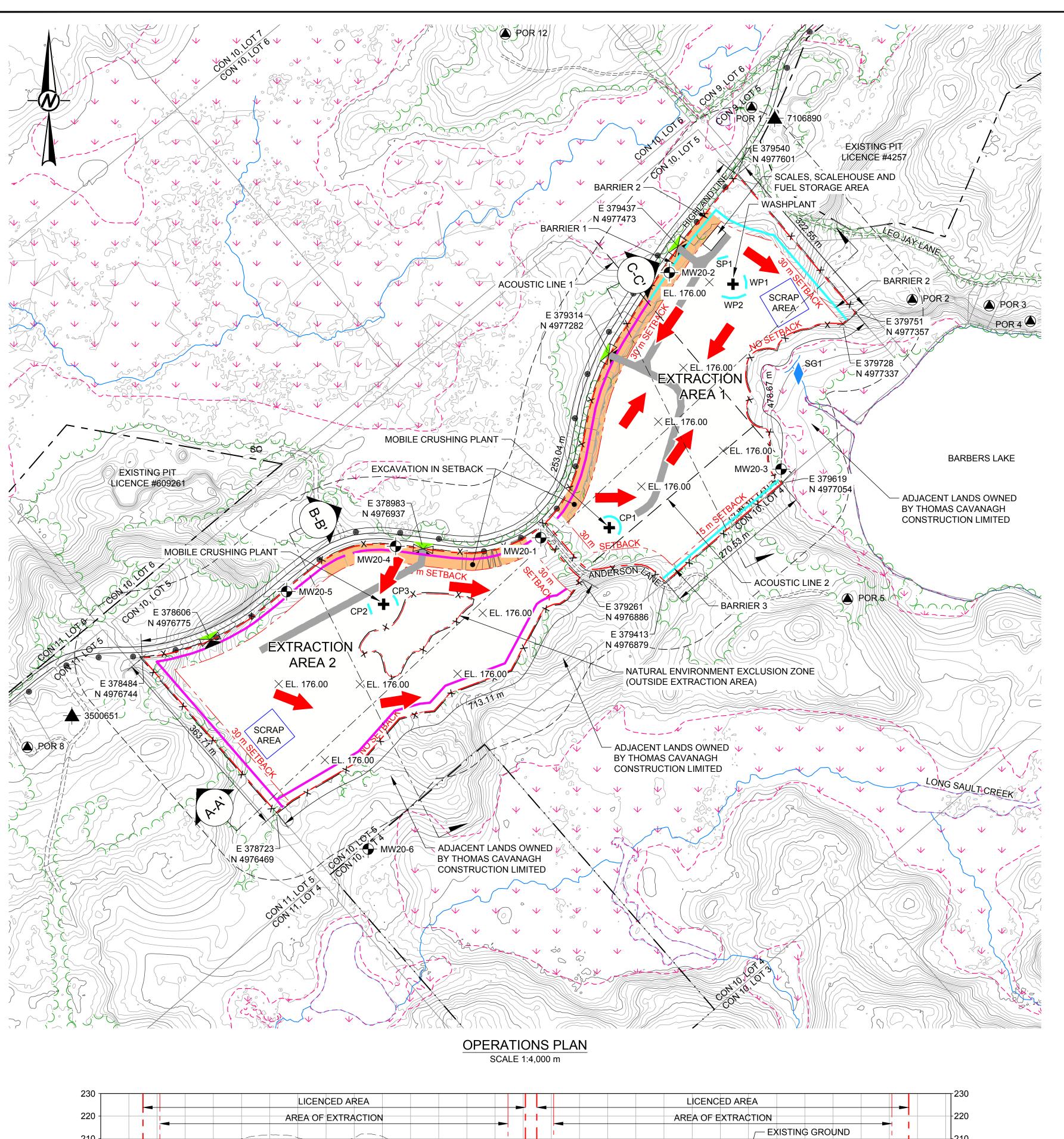
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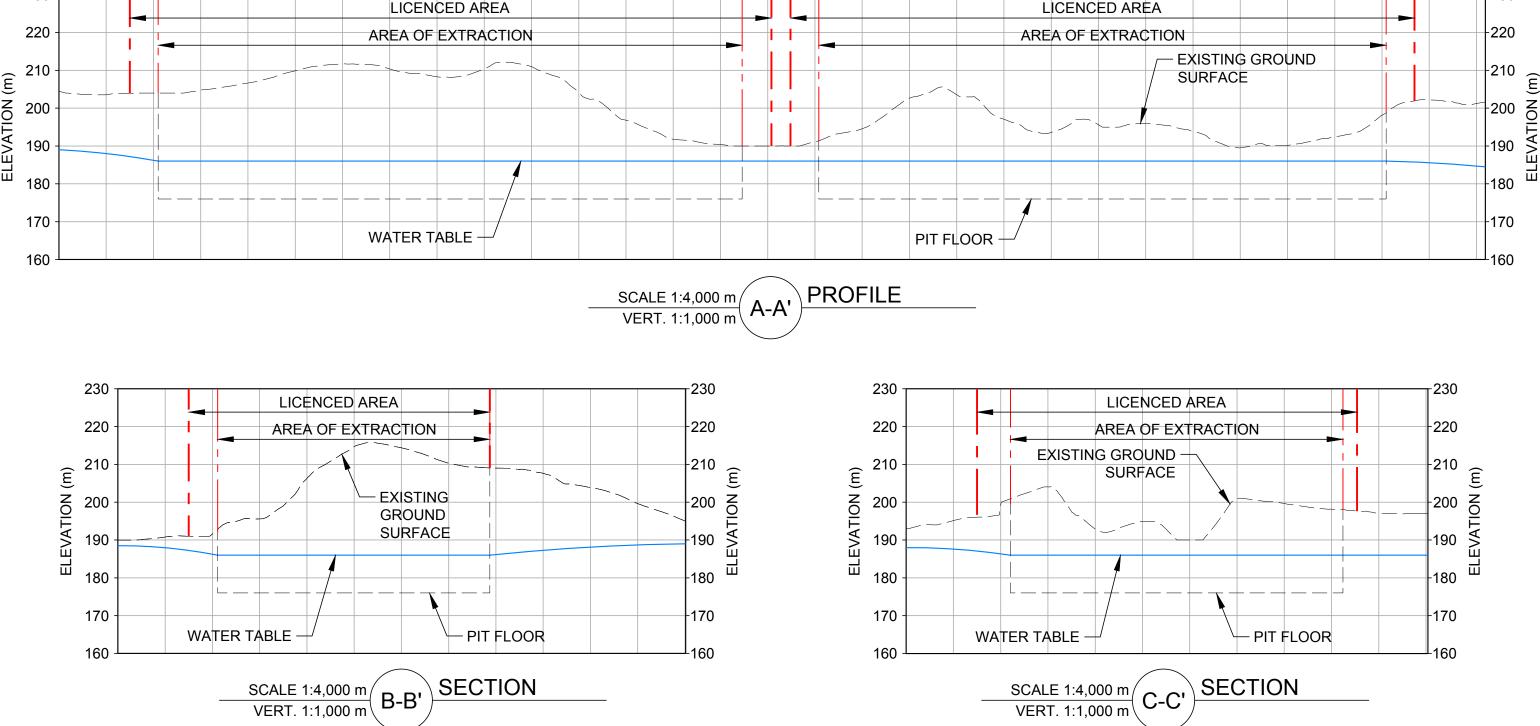
EXISTING FEATURES - SITE



ICANT	YYYY-MM-DD	2025-01-13
THOMAS	DESIGNED	ВН
SAVANAGH	PREPARED	JM
	REVIEWED	KAM
CONSTRUCTION LIMITED	ADDDOVED	KAM

APPROVED PROJECT NO. CONTROL DRAWING REV. 2 OF 5 19126620 0014

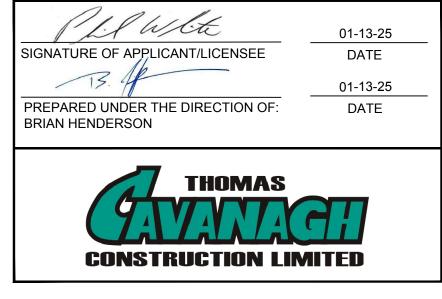




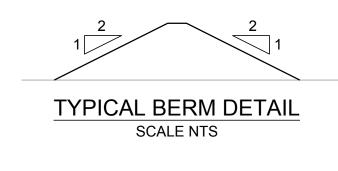
BARRIER	MINIMUM HEIGHT (M / MASL)	MINIMUM LENGTH (M)	MAXIMUM DISTANCE FROM SOURCE (M)	REQUIRED TO SHIELD LINE OF SIGHT FROM IDENTIFIED SOURCE ID	REQUIRED TO SHIELD LINE OF SIGHT TO IDENTIFIED RECEPTOR/S	DESCRIPTION
BARRIER <u>–</u> 1 (SITE BERM)	196 MASL	UP TO 100 M	-	MOBILE SCREENING PLANT AND EXTRACTION OPERATIONS OCCURRING IN EXTRACTION AREA 1 EAST OF LINE AA	POR_12*	NEW BARRIER (BERM / LIFT FACE): REQUIRED TO SHIELD NOISE IMPACTS TO THE IDENTIFIED RECEPTORS WHEN OPERATING IN EXTRACTION AREA 1 EAST OF ACOUSTIC LINE 1 (ONLY REQUIRED FOLLOWING DEVELOPMENT OF A NEW NOISE SENSITIVE DEVELOPMENT AT POR 12)
BARRIER <u>–</u> 2 SITE BERM)	196 MASL	UP TO 400 M	-	MOBILE SCREENING PLANT AND EXTRACTION OPERATIONS OCCURRING IN EXTRACTION AREA 1 EAST OF LINE AA	POR_1 POR_2 POR_3 POR_4	NEW BARRIER (BERM / LIFT FACE): REQUIRED TO SHIELD NOISE IMPACTS TO THE IDENTIFIED RECEPTORS WHEN OPERATING IN EXTRACTION AREA 1 EAST OF ACOUSTIC LINE 1
BARRIER <u>-</u> 3 SITE BERM)	3 M	UP TO 285 M	-	MOBILE SCREENING PLANT AND EXTRACTION OPERATIONS OCCURRING IN EXTRACTION AREA 1 SOUTH OF LINE BB	POR_5	NEW BARRIER (BERM): REQUIRED TO SHIELD NOISE IMPACTS AT THE IDENTIFIED RECEPTOR WHEN OPERATING IN EXTRACTION AREA 1 SOUTI OF ACOUSTIC LINE 2
BARRIER_SP1 (STOCKPILE)	4 M	10 M	20 M	SCREENER WHEN OPERATING IN EXTRACTION AREA 1	POR_1 POR_2 POR_3 POR_5	NEW BARRIER (STOCKPILE): REQUIRED TO BE MAINTAINED TO SHIELD NOISE IMPACTS AT THE IDENTIFIED RECEPTORS WHEN OPERATING GREATER THAN 20 M FROM A LIFT FACE OR SITE BERM THAT OTHERWISE SHIELDS IN THE DIRECTION OF THE IDENTIFIED RECEPTORS
BARRIER_WP1 (STOCKPILE)	7 M	20 M	25 M	WASH PLANT AND ASSOCIATED GENERATOR WHEN OPERATING IN EXTRACTION AREA 1	POR_2	NEW BARRIER (STOCKPILE): REQUIRED TO BE MAINTAINED TO SHIELD NOISE IMPACTS AT THE IDENTIFIED RECEPTOR
BARRIER_WP2 (STOCKPILE)	6 M	30 M	25 M	WASH PLANT AND ASSOCIATED GENERATOR WHEN OPERATING IN EXTRACTION AREA 1	POR_5	NEW BARRIER (STOCKPILE): REQUIRED TO BE MAINTAINED TO SHIELD NOISE IMPACTS AT THE IDENTIFIED RECEPTOR
BARRIER_CP1 (STOCKPILE)	10 M	47 M (55 M)*	20 M	CRUSHER WHEN OPERATING IN EXTRACTION AREA 1	POR_1 POR_2 POR_3 POR_5 POR_12*	NEW BARRIER (STOCKPILE): REQUIRED TO BE MAINTAINED TO SHIELD NOISE IMPACTS AT THE IDENTIFIED RECEPTOR
BARRIER_CP2 (STOCKPILE)	6 M	20 M	25 M	CRUSHER WHEN OPERATING IN EXTRACTION AREA 2	POR_8	NEW BARRIER (STOCKPILE): REQUIRED TO BE MAINTAINED TO SHIELD NOISE IMPACTS AT THE IDENTIFIED RECEPTOR
SARRIER_CP3 (STOCKPILE)	6 M	30 M	25 M	CRUSHER WHEN OPERATING IN EXTRACTION AREA 2	POR_1 POR_2 POR_3 POR_4 POR_5	NEW BARRIER (STOCKPILE): REQUIRED TO BE MAINTAINED TO SHIELD NOISE IMPACTS AT THE IDENTIFIED RECEPTOR

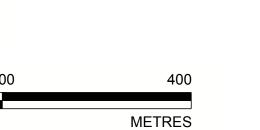
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*SHIELDING OF I	RECEPTORS RE	PRESENTING $ackslash$	/ACANT LOTS (ONLY REQUIRED FOLL	OWING DEVELO	PMENT OF A NEW NOISE SENSITIVE DEVELOPMENT.
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TEM/OPERATIONAL STANDARD (O.REG. 244/97)	VARIATION TO OPERATIONAL STANDARDS	RATIONALE
EXCAVATION SETBACK AREAS 0.13 (1) 9 0.13 (1) 10 0.13 (1) 11	EXCAVATION IN THE SETBACK AREAS CAN OCCUR ALONG HIGHLAND LINE ROAD IN AREAS IDENTIFIED ON PAGE 3 OF 5 WHERE ELEVATIONS OF THE EXISTING GROUND SURFACE IS ABOVE THE ELEVATION OF THE ROAD. AGGREGATE WILL BE REMOVED IN THE SETBACK AREA TO MATCH THE ELEVATION OF THE ROAD FENCE LINE TO A MAXIMUM DEPTH OF EXTRACTION OF 11 METRES.	REMOVAL OF AGGREGATE WITHIN THE SETBACK AREA ALONG THE ROAD WILL ALLOW FOR A CLEARER VIEW OF THE HIGHWAY IN BOTH DIRECTIONS AT THE ENTRANCES AND EXISTS.
SETBACKS 0.13 (1) 10i	NO SETBACK ALONG THE SOUTHEASTERN EDGE OF THE SITE WHERE THE ADJACENT LANDS ARE OWNED BY THE APPLICANT.	REDUCTION OF SETBACK ALONG COMMON BOUNDARY TO ALLOW FOR AGGREGATE EXTRACTION.



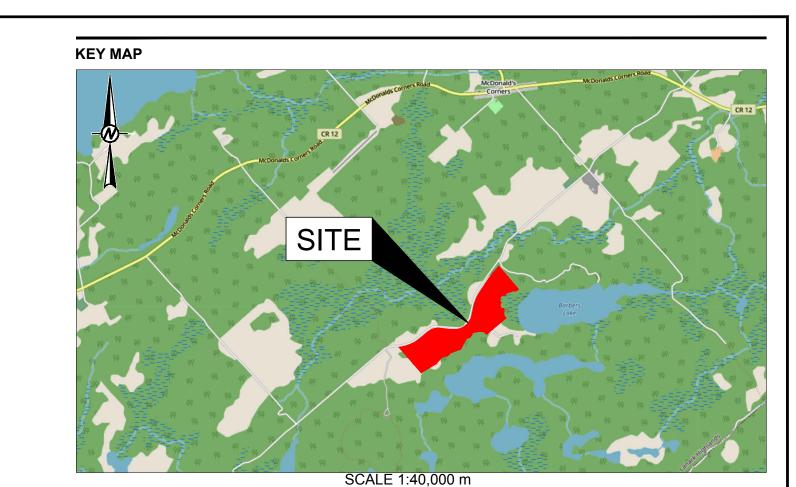
AMENDMENTS		DATE	APPROVAL DAT
SITE PLANS APPROVED BY THE MINISTR	RY OF NATURAL RESO	URCES AND	FORESTRY.
SIGNATURE			DATE





B.J. HENDERSON

01-13-25



HIGHLAND LINE PIT

LOT 5, CONCESSION 10 GEOGRAPHIC TOWNSHIP OF DALHOUSIE

TOWNSHIP OF LANARK HIGHLANDS,

LANARK COUNTY, ONTARIO

APPLICANT: THOMAS CAVANAGH CONSTRUCTION LIMITED 9094 CAVANAGH ROAD

ASHTON, ONTARIO

PIT LICENCE NO. 626599

- 1. LICENCED AREA, HIGHLAND LINE PIT 37.6 HECTARES.
- 2. AREA OF OPERATION, HIGHLAND LINE PIT **28.4** HECTARES. 3. THIS SITE PLAN IS PEPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A
- LICENCE FOR A PIT BELOW THE GROUND WATER TABLE. 4. THIS PLAN WAS PREPARED USING PHOTOGRAMMETRIC METHODS FROM AERIAL
- PHOTOGRAPHS. 5. LOT, CONCESSION AND BOUNDARY LINES ON THIS PLAN ARE APPROXIMATE.
- 6. THIS IS NOT A LEGAL SURVEY DRAWING IN ACCORDANCE WITH THE PROVINCE OF ONTARIO SURVEYORS ACT 1987. THIS DRAWING WAS PRODUCED USING STANDARD PHOTOGRAMMETRIC PRACTICES.

— BOUNDARY OF AREA TO BE LICENCED —— - - — LIMIT OF EXTRACTION

— — — — — 120-METRE SURROUND

BOREHOLE / MONITORING WELL

PRIVATE WELL (AS PER MINISTRY OF ENVIRONMENT, CONSERVATION AND

PARKS WATER WELL INFORMATION SYSTEM)



SURFACE WATER STATION

CON 10, LOT 5 CON 10, LOT 4 LOTS AND CONCESSION LINES

—— — ADJACENT PIT AND QUARRY BOUNDARY UTILITY POLE

BUILDING; S-SILO, H-HOUSE, G-GARAGE, B-BARN, S-SHED,

O-OFFICE, SC-SCALE HOUSE ROAD: PAVED

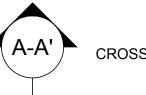
·---- ROAD: GRAVEL CONTOURS/INDEX CONTOURS

O.O.O.O.O.C WOODED AREA

WATERCOURSE

____ WETLAND

X — X PAGE WIRE AND TURTLE FENCE/GATE



CROSS-SECTIONS

ENTRANCE EXIT

GENERAL DIRECTION OF EXCAVATION

POINTS OF RECEPTION (PORs) FROM ACOUSTIC REPORT

WASH PLANT AND MOBILE CRUSHING PLANT

ACOUSTIC BERM

BERM

HAUL ROAD imes EL. 176.00 PROPOSED PIT FLOOR SPOT ELEVATION, mASL

REFERENCE(S)

- 1. KEY PLAN: Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community.
- 2. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD.
- UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS
- 3. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: UTM ZONE 18, VERTICAL DATUM: CGVD28

THOMAS CAVANAGH CONSTRUCTION LIMITED

PROJECT HIGHLAND LINE PIT

OPERATIONS PLAN



	YYYY-MM-DD	2025-01-13	
	DESIGNED	ВН	
П	PREPARED	JM	
	REVIEWED	KAM	
ED			

APPROVED PROJECT NO. CONTROL REV. DRAWING 3 OF 5 19126620

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33 PROPOSED ENTRANCE AND EXIT

ACCESS TO THE SITE FOR HAULAGE PURPOSES WILL BE FROM/TO HIGHLAND LINE ROAD. THE ENTRANCE/EXIT POINTS FOR THE SITE ARE SHOWN ON THE OPERATIONS SITE PLAN (PAGE 3 OF 5). THE WESTERNMOST ACCESS IN EXTRACTION AREA 2 CANNOT BE USED BY HEAVY EQUIPMENT DUE TO DEFICIENT SITE DISTANCE CHARACTERISTICS. ACCESS TO THE SITE WILL BE CONTROLLED BY GATES ERECTED AND MAINTAINED AT THE ENTRANCES/EXITS OF THE PROPERTY THESE GATES WILL BE KEPT CLOSED WHEN THE SITE IS NOT IN OPERATION.

A SIGN WITH THE FOLLOWING WORDING SHALL BE PLACED AT ALL TRUCK ENTRANCES/EXITS: ATTENTION DRIVERS USE EXTRA CAUTION WHEN DRIVING ON LOCAL ROADS AS THEY ARE ALSO USED BY SCHOOL BUSES, PEDESTRIANS, AND OTHERS IN THE COMMUNITY.

34 AREA TO BE EXTRACTED

THE MAXIMUM AREA OF EXTRACTION IS 35.1 28.4 HECTARES. THE SITE WILL BE DIVIDED INTO TWO EXTRACTION AREAS (EXTRACTION AREA 1 AND 2) WITH THE TWO AREAS SEPARATED BY ANDERSON LANE. THE MAXIMUM AREA OF EXTRACTION FOR AREA 1 IS 14.4 HECTARES AND THE MAXIMUM AREA OF EXTRACTION FOR AREA 2 IS 20.8 14.0 HECTARES. THE BOUNDARY OF THE AREA OF EXTRACTION IS SHOWN ON THE OPERATIONS SITE PLAN (PAGE 3 OF 5). THE EXTRACTION AREAS INCLUDE THE ARCHEOLOGICAL EXCLUSION ZONE BUT DO NOT INCLUDE THE NATURAL ENVIRONMENT EXCLUSION ZONE. NO GROUND DISTURBANCE CAN TAKE PLACE IN THE ARCHEOLOGICAL EXCLUSION ZONES UNTIL SUCH TIME AS AN AREA HAS BEEN CLEARED OF ARCHEOLOGICAL SIGNIFICANCE BY THE MINISTRY OF TOURISM, CULTURE AND SPORT.

36 PROPOSED FENCING

THE EXISTING FENCING WILL BE REPAIRED/REPLACED, AS NECESSARY, BEFORE EXTRACTION OPERATIONS BEGIN AT THE SITE. NEW FENCING IS PROPOSED FOR THE SOUTHERN BOUNDARY OF THE SITE. ALL SIDES OF THE SITE WILL BE FENCED DURING THE OPERATIONAL PERIOD INCLUDING BOTH SIDES OF ANDERSON LANE. THE FENCING SHALL BE A MINIMUM OF 1.2 METRES IN HEIGHT. TURTLE EXCLUSION FENCING WILL BE COMBINED WHERE FEASIBLE WITH EXISTING AND/OR NEW FENCING.

TURTLE EXCLUSION FENCING SHALL BE INSTALLED AROUND THE ENTIRETY OF EXTRACTION AREA 1 AND EXTRACTION AREA 2 PRIOR TO EXTRACTION IN EACH AREA, WITH OPENINGS TO ALLOW SITE ACCESS AT THE SITE ENTRANCES/EXITS. THE TURTLE EXCLUSION FENCING SHALL INCLUDE A "TURN-AROUND" AT THE END OF EACH FENCING SEGMENT WHERE IT MEETS THE SITE ENTRANCES/EXITS. FENCING SHALL BE SUITABLE FOR THE EXCLUSION OF TURTLES AT THE SITE AND WILL CONSIST OF METAL OR WOODEN FRAME WITH WIRE MESH AND/OR SLATS. THE FENCING SHALL BE DESIGNED TO BE HEAVY-DUTY AND SUITABLE FOR LONG-TERM USE. INSTALLATION METHODS WILL BE COMPLETED AS FOLLOWS:

MINIMUM HEIGHT OF 0.6 M

WILL BE IMPLEMENTED.

- MINIMUM BURIED DEPTH OF 0.1 M
- 3. PLACE POSTS 2-3 M APART ON THE ACTIVITY SIDE OF THE FENCE
- 4. BACK-FILL AND COMPACT SOIL ON BOTH SIDES
- . INSTALL TURN-AROUNDS AT THE ENDS OF EACH FENCE SEGMENT OF AT LEAST 0.5 M WIDE AND 2.0 M LONG

6. INSTALL PRIOR TO EMERGENCE FROM HIBERNATION TO AVOID NESTING TURTLES OR NESTS BEING TRAPPED WITHIN THE FENCING INSPECTION / MONITORING OF THE EXCLUSION FENCE BY SITE STAFF SHALL OCCUR TWICE ANNUALLY, ONCE DURING SPRING AFTER SNOW MELT AND ONCE

EARLY SUMMER TO FACILITATE THE FENCE BEING IN GOOD CONDITION DURING THE MOST ACTIVE SEASON FOR TURTLES. ANY DEFICIENCIES SHALL BE ADDRESSED IMMEDIATELY IF A GRADIENT EXISTS SUCH THAT DISCHARGE TO WATERBODIES COULD OCCUR DURING WORKS AT THE SITE, SEDIMENT AND EROSION CONTROL FENCING

37 PROPOSED BUILDINGS AND STRUCTURES, SCRAP STORAGE, STOCKPILES AND INTERNAL HAUL ROAD

NO BUILDINGS OR PERMANENT STRUCTURES ARE PROPOSED FOR THE SITE. A SCALE HOUSE AND SCALES WILL BE ESTABLISHED AT THE SITE HOWEVER IT WILL BE PORTABLE AND WILL MOVE WITHIN THE LICENSED AREA. THE SCALE HOUSE AND SCALES WILL INITIALLY BE ESTABLISHED NEAR THE ENTRANCE/EXIT AT THE NORTHEAST CORNER OF THE SITE GREATER THAN 30 METRES FROM THE LICENCED BOUNDARY

DESIGNATED ON THE OPERATIONS SITE PLAN (PAGE 3 OF 5) HOWEVER MAY MOVE WITHIN THE LICENSED AREA DURING OPERATIONS. THE SCRAP AREAS MUST REMAIN GREATER THAN 30 METRES FROM ANY WATER BODY AND THE LICENCED BOUNDARY AT ALL TIMES. SHOULD THERE BE NO LOCATION(S) WITHIN THE LICENSED BOUNDARY THAT SATISFIES THE REQUIREMENTS OF THE SITE PLAN NOTE, THEN SCRAP CANNOT BE STORED ON SITE. LOCATIONS OF THE AGGREGATE STOCKPILES WILL FOLLOW OPERATIONS AND THEREFORE VARY ON SITE. STOCKPILES WILL BE LOCATED NO CLOSER

SCRAP FROM THE SITE WILL BE TEMPORARILY STORED IN DESIGNATED AREAS. SCRAP STORAGE WILL INITIALLY BE ESTABLISHED WITHIN THE AREAS

THAN 30 METRES TO THE LICENSED BOUNDARY. EXCESS TOPSOIL WILL BE STOCKPILED IN BERMS WITHIN THE LICENSED AREA AS IT BECOMES AVAILABLE, FOR LATER USE IN

REHABILITATION INTERNAL HAUL ROADS WILL BE ESTABLISHED WITHIN THE PIT FOLLOWING THE DIRECTION OF EXCAVATION. DUST WILL BE MITIGATED ON SITE. WATER OR

ANOTHER PROVINCIALLY APPROVED DUST SUPPRESSANT WILL BE APPLIED TO INTERNAL HAUL ROADS AS OFTEN AS REQUIRED TO MITIGATE DUST. 38 LOCATION OF ANY PROPOSED PERMANENT AND/OR TEMPORARY PROCESSING AREA(S) ON THE SITE

PROCESSING WILL OCCUR IN ACCORDANCE WITH THE ACOUSTIC ASSESSMENT REPORT OF THE SITE PREPARED BY FREEFIELD LTD. AND THE OTHER TECHNICAL REPORTS. PROCESSING AREAS WILL OPERATE IN THE AREAS IDENTIFIED ON THE OPERATIONS SITE PLAN (PAGE 3 OF 5).

DUST WILL BE MITIGATED ON SITE. WATER OR ANOTHER PROVINCIALLY APPROVED DUST SUPPRESSANT WILL BE APPLIED TO PROCESSING AREAS AS OFTEN AS NECESSARY TO MITIGATE DUST. PROCESSING EQUIPMENT WILL BE EQUIPPED WITH DUST SUPPRESSION OR COLLECTION DEVICES WHERE THE EQUIPMENT CREATES DUST AND IS BEING OPERATED WITHIN 300 METRES OF A SENSITIVE RECEPTOR

PROCESSING EQUIPMENT WILL NOT BE LOCATED WITHIN 30 METRES OF THE LICENSED BOUNDARY 39 LOCATION OF ANY PROPOSED RECYCLABLE MATERIALS

IMPORTATION OF RECYCLABLE MATERIALS WILL NOT BE PERMITTED ON THIS SITE.

AGGREGATE STOCKPILES MAY INCLUDE RECYCLABLE MATERIALS AND IMPORTED AGGREGATE MATERIALS REQUIRED FOR BLENDING PROCESSES. THE OCATION OF THE RECYCLABLE MATERIAL WILL BE IN AREAS DESIGNATED ON THE OPERATIONS SITE PLAN (PAGE 3 OF 5). A MAXIMUM OF 100,000 METRIC ONNES OF RECYCLABLE MATERIAL WOULD BE PRESENT ON SITE.

STOCKPILES WILL BE LOCATED NO CLOSER THAN 30 METRES TO THE LICENSED BOUNDARY

RECYCLING OF CONCRETE AND ASPHALT WILL BE PERMITTED AS AN ACCESSORY ACTIVITY ON THIS SITE. ASPHALT MATERIALS WILL BE STORED AT LEAST 30 METRES HORIZONTALLY FROM ANY WATER SOURCE. ANY REBAR AND OTHER STRUCTURAL METAL REMOVED FROM THE MATERIAL DURING PROCESSING WILL BE STORED IN THE DESIGNATED SCRAP AREAS AND WILL BE REMOVED ON AN ONGOING BASIS. RECYCLING ACTIVITIES MUST NOT PRECLUDE OR HINDER THE PROGRESSIVE OR FINAL REHABILITATION REQUIREMENTS OF THIS PLAN. ONCE FINAL REHABILITATION HAS BEEN COMPLETED, ALL RECYCLING ACTIVITIES WILL CEASE AND RECYCLABLE MATERIALS WILL BE REMOVED FROM THE SITE.

40 SEQUENCE/DIRECTION OF OPERATION

THE SITE WILL BE DIVIDED INTO TWO EXTRACTION AREAS (EXTRACTION AREA 1 AND AREA 2). THE TWO EXTRACTION AREAS CAN BE OPERATED SIMULTANEOUSLY.

IN EXTRACTION AREA 1, EXTRACTION WILL COMMENCE IN THE AREA OF EACH ENTRANCE/EXIT. FROM THE NORTHERN ENTRANCE/EXIT, EXTRACTION WILL PROCEED TO THE SOUTHEAST AND THEN TO THE SOUTHWEST. FROM THE SOUTHERN ENTRANCE/EXIT. EXTRACTION WILL PROCEED TO THE SOUTHEAST AND

IN EXTRACTION AREA 2, EXTRACTION WILL COMMENCE IN THE AREA OF EACH ENTRANCE/EXIT. FROM THE NORTHERN ENTRANCE/EXIT, EXTRACTION WILL PROCEED TO THE SOUTH AND EAST. FROM THE SOUTHERN ENTRANCE/EXIT, EXTRACTION WILL PROCEED TO THE NORTHEAST AND RADIATE TO THE NORTH, EAST AND SOUTH

41 STRIPPING AND STOCKPILING OF TOPSOIL/OVERBURDEN

TOPSOIL OR OVERBURDEN STRIPPED IN THE OPERATION OF THE SITE MAY SHALL BE STORED IN BERMS WITHIN THE SETBACK ON ALL SIDES OF THE SITE AND WILL BE USED IN THE REHABILITATION OF THE SITE. DURING CONSTRUCTION AND EARTH-MOVING OPERATIONS, SEDIMENT CONTROL MEASURES WILL BE PUT IN PLACE TO PREVENT RUNOFF OF SUSPENDED

SOLIDS FROM LEAVING THE SITE. THE LOCATIONS OF THE BERMS ARE AS SHOWN ON THE OPERATIONS SITE PLAN (PAGE 3 OF 5).

42 EXTRACTION LIFTS

THE EXTRACTION WILL TAKE PLACE IN A SERIES OF THREE LIFTS, WITH THE BOTTOM LIFT REACHING A FINAL ELEVATION OF 176 METRES ABOVE SEA LEVEL AS INDICATED ON THE OPERATIONS SITE PLAN (PAGE 3 OF 5). THE MAXIMUM LIFT HEIGHT WOULD BE TEN (10) METRES.

EXTRACTION LIFTS AND BENCH HEIGHTS WILL BE IN COMPLIANCE WITH MINISTRY OF LABOUR REQUIREMENTS. THE PIT MAY OPERATE MULTIPLE LIFTS AND BENCHES IN ORDER TO MEET MARKET DEMAND AND/OR CONTRACT REQUIREMENTS FOR SPECIFIC MATERIALS. 43 SURFACE WATER DIVERSION/DISCHARGE

BASED ON TOPOGRAPHY, WATER FROM THE SITE CURRENTLY FLOWS NORTH TOWARDS HIGHLAND LINE, SOUTH TOWARDS THE UNEVALUATED WETLAND ALONG LONG SAULT CREEK, AND EAST TOWARDS BARBERS LAKE. DURING OPERATIONS, THE WATER FROM THE ACTIVE SITE WILL DRAIN TO THE OPEN PIT AREAS AND REMAIN AS WATER BODY FEATURES ONCE THE EXCAVATION IS BELOW THE WATER TABLE. THE PIT LAKES WILL OUTLET INTO BARBERS LAKE ON THE EASTERN LIMIT OF EXTRACTION AREA 1.

44 SOURCE WATER PROTECTION POLICIES THE SITE FALLS OUTSIDE OF ANY IDENTIFIED SOURCE WATER PROTECTION AREAS AND, AS SUCH, NO SOURCE WATER PROTECTION POLICIES ARE APPLICABLE

TO THE SITE. 45 PROPOSED FUEL STORAGE AREAS

A FUEL STORAGE AREA WILL BE ESTABLISHED AT THE SITE NEAR THE SCALE HOUSE. FUEL AND ASSOCIATED PRODUCTS WILL BE STORED IN ABOVE GROUND TANKS OR CONTAINERS AND IN COMPLIANCE WITH THE TECHNICAL STANDARDS AND SAFETY ACT, 2000, LIQUID FUELS REGULATION O.REG.217/01 AND LIQUID FUELS HANDLING CODE, 2000. FUEL TRUCKS MAY BE USED FOR REFUELING OF ON-SITE EQUIPMENT WITHIN THE PIT IN ACCORDANCE WITH THE "PRESCRIBED CONDITIONS" THAT APPLY TO ALL CLASS A. BELOW WATER TABLE PIT LICENCES. A SPILLS CONTINGENCY PLAN WILL BE DEVELOPED PRIOR TO THE FIRST FUEL

46 LOCATION OF ALL EXCAVATION SETBACKS

EXCAVATION SETBACKS INCLUDE A 30-METRE SETBACK ON THE NORTH (HIGHLAND LINE ROAD) AND WEST (ROAD ALLOWANCE BETWEEN CONCESSION 10 AND CONCESSION 11) SIDES OF THE SITE AND THROUGH THE CENTRE OF THE SITE ADJACENT TO ANDERSON LANE. A 30-METRE SETBACK ALSO EXISTS FROM

WETLANDS ON OR WITHIN 120 METRES FROM THE SITE. A 15-METRE SETBACK EXISTS ON THE NORTHEAST SIDE OF THE SITE AND ALONG THE WESTERN BOUNDARY OF THE PROPERTY. NO SETBACK IS PRESENT ALONG IN THE SOUTHEASTERN EDGE PORTION OF THE SITE WHERE AS THE ADJACENT LANDS ARE PROPERTY IS ALSO OWNED BY THOMAS CAVANAGH CONSTRUCTION LIMITED.

PRIOR TO SITE OPERATIONS, ALL SETBACKS FROM NATURAL HERITAGE FEATURES SHALL BE CLEARLY MARKED UNDER THE DIRECTION OF A QUALIFIED

ECOLOGIST. ARCHAEOLOGICAL EXCLUSION ZONES HAVE ALSO BEEN ESTABLISHED TO INCLUDE PORTIONS OF THE SITE THAT HAVE NOT BEEN SUBJECT TO A STAGE 2 ARCHAEOLOGICAL ASSESSMENT AND AS A RESULT HAVE NOT BEEN CLEARED BY THE MINISTRY OF TOURISM, CULTURE AND SPORT. FOLLOWING FURTHER ASSESSMENT. SHOULD THESE AREAS BE CLEARED BY THE MINISTRY OF TOURISM, CULTURE AND SPORT, EXTRACTION CAN PROCEED TO THE STANDARD

REGULATORY EXCAVATION SETBACK: THE EXCAVATION SETBACKS ARE AS SHOWN ON THE OPERATIONS SITE PLAN (PAGE 3 OF 5). **47 FINAL ELEVATION**

THE FINAL FLOOR ELEVATION OF THE SITE WILL BE APPROXIMATELY 176 METRES ABOVE SEA LEVEL AS INDICATED BY THE SPOT ELEVATIONS ON THE OPERATIONS SITE PLAN (PAGE 3 OF 5).

48 PROPOSED BERMS

STORAGE BERMS FOR TOPSOIL AND OVERBURDEN WILL BE LOCATED WITHIN THE SETBACKS ON ALL SIDES OF THE SITE WHERE THEY EXIST, OR ALONG THE EDGE OF THE EXTRACTION AREA, GREATER THAN 3 METRES FROM THE LICENCE BOUNDARY, IN AREAS WHERE NO SETBACKS EXIST. THE MINIMUM HEIGHT FOR STORAGE BERMS WILL BE 2 METRES. THE MINIMUM HEIGHT FOR THE BERMS THAT ARE ARE REQUIRED FOR NOISE ATTENUATION WILL BE CONSTRUCTED AS PER THE RECOMMENDED NOISE BARRIERS TABLE (PAGE 3 OF 5). MATERIAL MAY BE IMPORTED TO COMPLETE THE NOISE ATTENUATION BERMS SHOULD THERE BE INSUFFICIENT ON-SITE MATERIAL. IMPORTED MATERIAL MUST MEET THE REQUIREMENTS OF NOTE 62 (PAGE 5 OF 5). 49 BERM VEGETATION AND MAINTENANCE

BERMS WILL BE KEPT BACK AT LEAST 3 METRES FROM THE LICENSE BOUNDARY AND WILL HAVE AN APPROXIMATE SLOPE OF 2:1. THE SLOPES WILL BE SEEDED WITH NATIVE VEGETATION TO ENSURE THAT ADEQUATE VEGETATION IS ESTABLISHED AND MAINTAINED TO CONTROL EROSION.

50 METHOD OF EXTRACTION AND EQUIPMENT TO BE USED THE AGGREGATE AT THE SITE WILL BE EXTRACTED USING EXCAVATION EQUIPMENT. THE EQUIPMENT TO BE LOCATED ON SITE WILL INCLUDE THE FOLLOWING:

LOADERS, DUMP TRUCKS, WATER TRUCKS, EXCAVATORS, BULLDOZERS, HAULAGE TRUCKS, SCRAPERS, AND MOBILE CRUSHING/SCREENING AND WASHING

THE PLANTS WILL INCLUDE A SCREENING/WASHING OPERATION CONSISTING OF, BUT NOT LIMITED TO, A HOPPER (FEED BIN), DRY SCREEN AND WET SCREEN DECKS, A CLASSIFIER, TWO DOUBLE SCREW MATERIAL WASHERS, A DEWATERING DERRICK, DIESEL ENGINE, SPRAYBARS AND CONVEYORS AND STACKERS. AND A CRUSHING OPERATION, CONSISTING OF, BUT NOT LIMITED TO, A HOPPER (FEED BIN), PRIMARY AND SECONDARY CRUSHING UNITS, A DIESEL ENGINE, VIBRATING SCREENS, A MAGNETIC SEPARATOR AND CONVEYORS.

51 PROPOSED TREE SCREENS NO ADDITIONAL TREE SCREENS ARE PROPOSED AT THIS TIME. NATURAL TREE SCREENS CURRENTLY EXIST ON THE NORTHEAST, SOUTHEAST AND PORTIONS OF THE SOUTHWEST SIDES OF THE SITE.

OPERATIONS PLAN NOTES (PAGE 4 OF 5) CONTINUED:

52 HOURS OF OPERATION

53 TREES AND STUMPS

FOLLOWING:

HOURS OF OPERATION ARE 24 HOURS FROM 06:00 - 21:00 SUBJECT TO THE FOLLOWING RESTRICTIONS DAYTIME OPERATIONS (07:00 - 19:00) - DURING THE DAYTIME PERIOD. ALL SIGNIFICANT NOISE SOURCES ARE ASSUMED TO BE IN OPERATION AND INCLUDE THE

- ONE MOBILE SCREENING PLANT
- ONE MOBILE WASH PLANT
- ONE MOBILE CRUSHING PLANT
- UP TO SIX LOADERS OR EXCAVATORS
- ON-SITE TRUCK MOVEMENTS USED TO DELIVER MATERIAL TO THE MOBILE CRUSHING PLANT AND SHIP PROCESSED PRODUCT OFF-SITE.

EVENING AND NIGHT TIME OPERATIONS (19:00 - 07:00) - DURING THE EVENING AND NIGHT TIME PERIOD DURING THE PERIOD FROM 06:00 - 07:00 AND 19:00 - 21:00, THE FOLLOWING SIGNIFICANT NOISE SOURCES MAY BE IN OPERATION: UP TO TWO LOADERS OR EXCAVATORS

ON-SITE TRUCK MOVEMENTS USED TO SHIP PROCESSED PRODUCT OFF-SITE.

FURTHER DETAILS ARE PROVIDED WITHIN THE RECOMMENDATIONS OF THE ACOUSTIC ASSESSMENT REPORT (REFER TO TECHNICAL REPORT RECOMMENDATIONS). RESPONSES TO EMERGENCIES AND REQUIRED MAINTENANCE IS NOT LIMITED BY THE HOURS OF OPERATION LISTED IN THE ACOUSTIC ASSESSMENT REPORT.

WITHIN THE AREA TO BE EXTRACTED, ALL TREES WITHIN 5 METRES OF THE EXCAVATION FACE WILL BE REMOVED. ANY TREES PRESENT WITHIN THE EXTRACTION AREA ARE TO BE HARVESTED AND UTILIZED IN THE MOST APPROPRIATE MANNER. SMALL TREES AND STUMPS REMAINING ONSITE WILL BE GROUND UP OR BROKEN DOWN USING AN EXCAVATOR AND MIXED WITH TOPSOIL TO BE UTILIZED DURING REHABILITATION OF THE SITE. LARGE PIECES OF WOOD MATERIAL MAY BE LEFT IN THE REHABILITATED AREAS AS HABITAT STRUCTURE AND COVER FOR SMALL MAMMALS AS WELL AS BASKING AREAS FOR REPTILES AND PERCHING AREAS FOR WATERFOWL.

54 VARIATIONS FROM OPERATIONAL REQUIREMENTS

REFER TO VARIATIONS FROM OPERATIONAL REQUIREMENTS TABLE ON THE OPERATIONS SITE PLAN (PAGE 3 OF 5). **55 MAXIMUM ANNUAL TONNAGE**

THE NUMBER OF TONNES TO BE REMOVED FROM THE SITE IN A CALENDAR YEAR WILL NOT EXCEED 1,000,000. **OPERATIONS CROSS-SECTIONS**

69 LOCATION OF CROSS-SECTIONS REFER TO OPERATIONS PLAN (PAGE 3 OF 5) FOR LOCATION OF OPERATIONS CROSS-SECTIONS.

70 HORIZONTAL AND VERTICAL SCALES

APPROPRIATE HORIZONTAL AND VERTICAL SCALES ARE MARKED ON THE CROSS-SECTIONS. 71 OPERATIONS CROSS-SECTIONS

THREE OPERATIONS CROSS-SECTIONS ARE PROVIDED ON THE OPERATIONS SITE PLAN (PAGE 3 OF 5). DURING OPERATIONS, THE WATER TABLE SURROUNDING THE PITS WILL MATCH THE WATER LEVEL IN THE PIT LAKE (186 METRES ABOVE SEA LEVEL). THE PREDICTED WATER TABLE DURING OPERATIONS IS SHOWN ON THE OPERATIONS CROSS-SECTIONS ON THIS PLAN (PAGE 3 OF 5).

73 TYPICAL BERM DESIGN A CROSS-SECTION OF A TYPICAL BERM DESIGN IS SHOWN ADJACENT TO THE OPERATIONS CROSS-SECTIONS (PAGE 3 OF 5).

TECHNICAL REPORT RECOMMENDATIONS AND/OR MONITORING

LIST OF REFERENCES WHICH APPLY SPECIFICALLY TO THE SITE PLAN:

FREEFIELD LTD., 2022. ACOUSTIC ASSESSMENT FOR THE HIGHLAND LINE PIT, LANARK HIGHLAND TOWNSHIP, LANARK COUNTY, ONTARIO. PREPARED FOR THOMAS CAVANAGH CONSTRUCTION LIMITED, SEPTEMBER 2022.

GOLDER ASSOCIATES LTD., 2022. NATURAL ENVIRONMENT REPORT, PROPOSED HIGHLAND LINE PIT, LANARK COUNTY, ONTARIO. PREPARED FOR THOMAS CAVANAGH CONSTRUCTION LIMITED, DECEMBER 2022.

GOLDER ASSOCIATES LTD., 2022. LEVEL 1 AND LEVEL 2 WATER REPORT, PROPOSED HIGHLAND LINE PIT, TOWNSHIP OF LANARK HIGHLANDS, ONTARIO. PREPARED FOR THOMAS CAVANAGH CONSTRUCTION LIMITED, DECEMBER 2022.

4. GOLDER ASSOCIATES LTD., 2020. STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT, DUNCAN PIT PROPERTY, PART OF LOT 5, CONCESSION 10, DALHOUSIE TOWNSHIP, LANARK COUNTY, ONTARIO. PREPARED FOR THOMAS CAVANAGH CONSTRUCTION LIMITED,

GOLDER ASSOCIATES LTD., 2021. STAGE 3 ARCHAEOLOGICAL ASSESSMENT, DUNCAN SITE (BFGD-9), PART OF LOT 5, CONCESSION 10, DALHOUSIE TOWNSHIP, LANARK COUNTY, ONTARIO. PREPARED FOR THOMAS CAVANAGH CONSTRUCTION LIMITED, FEBRUARY

GOLDER ASSOCIATES LTD., 2021. STAGE 1 ARCHAEOLOGICAL ASSESSMENT, HIGHLAND LINE PIT, PART OF LOTS 4 AND 5 CONCESSION 10, DALHOUSIE TOWNSHIP, LANARK COUNTY, ONTARIO. PREPARED FOR THOMAS CAVANAGH CONSTRUCTION LIMITED, APRIL 14, 2021.

GOLDER ASSOCIATES LTD., 2021. STAGE 4 ARCHAEOLOGICAL MITIGATION, TURNBULL SITE (BFGD-8), PART OF LOT 5, CONCESSION

10, DALHOUSIE TOWNSHIP, LANARK COUNTY, ONTARIO. PREPARED FOR THOMAS CAVANAGH CONSTRUCTION LIMITED, MAY 14, 2021. 8. GOLDER ASSOCIATES LTD., 2021. STAGE 3 ARCHAEOLOGICAL ASSESSMENT, TURNBULL SITE (BFGD-8), PART OF LOT 5, CONCESSION

9. GOLDER ASSOCIATES LTD., 2021. STAGE 4 ARCHAEOLOGICAL MITIGATION, DUNCAN SITE (BFGD-9), PART OF LOT 5, CONCESSION 10, DALHOUSIE TOWNSHIP, LANARK COUNTY, ONTARIO. PREPARED FOR THOMAS CAVANAGH CONSTRUCTION LIMITED, JUNE 8, 2021.

10. MATRIX HERITAGE INC., 2024. STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT, HIGHLAND LINE PIT, PART OF LOT 5, CONCESSION 10, GEOGRAPHIC TOWNSHIP OF DALHOUSIE, TOWNSHIP OF LANARK HIGHLANDS, LANARK COUNTY, ONTARIO, NOVEMBER 5, 2024. STUDY RECOMMENDATIONS AND MONITORING REQUIREMENTS HAVE BEEN INCORPORATED INTO THE SITE PLAN NOTES, AS APPROPRIATE, AND ARE

SUMMARIZED BELOW: **NATURAL ENVIRONMENT:** 1. NO CLEARING OF VEGETATION WILL TAKE PLACE WITHIN THE CORE BREEDING BIRD SEASON OR ACTIVE SEASON FOR BATS (APRIL 1

- AUGUST 31 SEPTEMBER 30) UNLESS A NESTING SURVEY HAS BEEN COMPLETED BY A QUALIFIED BIOLOGIST WITHIN 24 48 HOURS OF THE CLEARING VEGETATION REMOVAL, AND NO ACTIVE NESTS WERE OBSERVED.

FENCE AND PROTECT THE AREA IDENTIFIED AS MATERNITY ROOST HABITAT FOR TRI-COLOURED BAT TO PREVENT INTRUSION INTO THIS AREA. AVOID PLACING LIGHTING IN THE VICINITY OF THIS AREA.

AN AWARENESS PACKAGE, SPECIES AT RISK ENCOUNTER PROTOCOL AND SPECIES AT RISK TRAINING PROGRAM IS TO BE PREPARED THAT LISTS THE SPECIES AT RISK THAT MAY BE PRESENT ON THE SITE OR IN THE LOCAL LANDSCAPE, AND IDENTIFIES WHAT TO DO IF ONE IS OBSERVED ON THE SITE. THE AWARENESS PACKAGE WILL INCLUDE:

 A. INFORMATION / TRAINING ON IDENTIFYING SPECIES AT RISK; B. WHAT TO DO IF A SPECIES AT RISK IS OBSERVED (MOVING, INJURED, DEAD OR NESTING);

C. HOW TO PROTECT A TURTLE OR BIRD NEST;

OF 30 M SETBACKS FROM THE WETLAND BOUNDARIES.

D. INFORMATION ON HOW TO REPORT A SPECIES AT RISK SIGHTING TO THE NATURAL HERITAGE INFORMATION CENTRE; AND, E. A REQUIREMENT THAT IF A SPECIES AT RISK IS FOUND ON THE SITE, ALL WORK MUST STOP AND THE SPECIES SHALL BE PROTECTED FROM HARM. MECP SHALL BE NOTIFIED IMMEDIATELY TO SEEK GUIDANCE ON WAYS TO AVOID IMPACTS UNDER THE

ENDANGERED SPECIES ACT (E.G., MITIGATION, CONDITIONAL EXEMPTION) PRIOR TO RESUMING WORK.

STANDARD BEST MANAGEMENT PRACTICES FOR NOISE AND DUST MITIGATION AT PIT OPERATIONS WILL BE EMPLOYED TO

REDUCE IMPACTS ON ADJACENT LANDS, AND THE HABITATS THEY PROVIDE. 5. PRIOR TO SITE OPERATIONS, ALL WETLAND BOUNDARIES SHALL BE MARKED AND SURVEYED IN THE FIELD UNDER THE DIRECTION OF A QUALIFIED AND CERTIFIED OWES WETLAND EVALUATOR, USING OWES PROTOCOLS. THIS SHALL INCLUDE THE DEMARACTION

ACOUSTIC ASSESSMENT:

I. NOISE BARRIERS AND BERMS: A.NOISE BARRIERS AND BERMS ARE TO BE PROVIDED AS PER RECOMMENDED NOISE BARRIERS TABLE AND OPERATIONS SITE PLAN (PAGE 3 OF 5). B. NOISE BARRIERS AND BERMS ARE TO BE SOLID, HAVING NO GAPS, AND ARE TO HAVE A SURFACE DENSITY OF NO LESS THAN 20 KG/M². EXAMPLES OF

I. LIFT FACE OR EXISTING TERRAIN; II. EARTH, GRAVEL OR AGGREGATE BERMS OR STOCKPILES;

SUITABLE BARRIERS OR BERMS INCLUDE:

III. CONCRETE OR BRICK WALLS; IV. COMMERCIAL NOISE BARRIERS;

V. SHIPPING CONTAINERS OR BUILDINGS;

VI. A PORTABLE BARRIER SUCH AS A TRUCK TRAILER EQUIPPED WITH MOVABLE FLAPS TO BLOCK THE SPACE BETWEEN THE GROUND AND THE BOTTOM OF THE TRAILER AND INCREASE HEIGHT IF REQUIRED. C. NOISE BARRIERS SHIELDING PORTABLE EQUIPMENT MAY BE PROGRESSIVELY ESTABLISHED TO PROVIDE SHIELDING FROM LOCATION OF OPERATION TO

I. THE SCREENER IS TO BE LOCATED ON THE PIT FLOOR AT A MAXIMUM ELEVATION OF 188 METRES ABOVE SEA LEVEL

THE IDENTIFIED NOISE SENSITIVE POINT OF RECEPTION (POR). 2. MOBILE SCREENING PLANT

A. THE OPERATION OF THE MOBILE SCREENING PLANT (SCREENER) MAY SHALL TAKE PLACE ONLY DURING THE DAYTIME PERIOD (07:00 TO 19:00) AND SHALL COMPLY WITH THE FOLLOWING:

II. NOISE BARRIERS ARE TO BE PROVIDED AS PER RECOMMENDED NOISE BARRIERS TABLE AND OPERATIONS SITE PLAN (PAGE 3 OF 5). A. THE OPERATION OF THE WASH PLANT AND ASSOCIATED DIESEL GENERATOR MAY SHALL TAKE PLACE ONLY DURING THE DAYTIME PERIOD (07:00 TO 19:00) AND SHALL COMPLY WITH THE FOLLOWING:

I. THE WASH PLANT IS TO BE LOCATED ON THE PIT FLOOR AT A MAXIMUM ELEVATION OF 188 METRES ABOVE SEA LEVEL IN LOCATIONS SHOWN ON THE OPERATIONS SITE PLAN (PAGE 3 OF 5).

II. NOISE BARRIERS ARE TO BE PROVIDED AS PER RECOMMENDED NOISE BARRIERS TABLE AND OPERATIONS SITE PLAN (PAGE 3 OF 5).

01-13-25 SIGNATURE OF APPLICANT/LICENSEE DATE 01-13-25 PREPARED UNDER THE DIRECTION OF: DATE **BRIAN HENDERSON**

CONSTRUCTION LIMITE

AMENDMENTS DATE | APPROVAL DATE SITE PLANS APPROVED BY THE MINISTRY OF NATURAL RESOURCES AND FORESTRY. SIGNATURE DATE

OPERATIONS PLAN NOTES (PAGE 4 OF 5) CONTINUED:

III. THE MAXIMUM OUTDOOR SOUND POWER OF THE GENERATOR, IF USED TO PROVIDE POWER TO THE WASH PLANT, MUST NOT EXCEED 108.5 DBA. TO ACHIEVE THESE RATINGS THE GENERATOR WILL LIKELY NEED TO BE HOUSED INSIDE AN ENCLOSURE AND FITTED WITH AN EXHAUST SILENCER THAT MEETS THE MINIMUM INSERTION LOSS REQUIREMENTS LISTED IN THE MINIMUM INSERTION LOSS FOR GENERATOR EXHAUST SILENCER TABLE (PAGE 4 OF 5). THE SILENCER IS TO BE LOCATED INSIDE THE ENCLOSURES OR AS CLOSE AS POSSIBLE TO THE LOCATION WHERE THE EXHAUST EXITS THE ENCLOSURES WITH THE DUCT MATERIAL BETWEEN THE SILENCER AND THE GENERATOR CONSTRUCTED OF 16-GAUGE WEATHER RESISTANT METAL. THE SILENCERS SHALL HAVE A HIGH TRANSMISSION LOSS CASING. THIS ITEM DOES NOT APPLY IF HYDRO IS USED TO PROVIDE POWER TO THE PLANT: THE GENERATOR IS TO BE HOUSED INSIDE A TRAILER AND FITTED WITH AN EXHAUST SILENCER THAT MEETS THE MINIMUM INSERTION LOSS REQUIREMENTS LISTED IN "THE MINIMUM INSERTION LOSS FOR GENERATOR EXHAUST SILENCER TABLE (PAGE 4 OF 5)". THE SILENCER IS TO BE LOCATED INSIDE THE TRAILER OR AS CLOSE AS POSSIBLE TO THE LOCATION WHERE THE EXHAUST EXITS THE TRAILER WITH THE DUCT MATERIAL BETWEEN THE SILENCER AND THE GENERATOR CONSTRUCTED OF 16-GAUGE WEATHER RESISTANT METAL. THE SILENCERS SHALL HAVE A HIGH TRANSMISSION LOSS CASING. THIS ITEM DOES NOT APPLY IF HYDRO IS USED TO PROVIDE POWER TO THE PLANT.

4. MOBILE CRUSHING PLANT

5. LOADERS AND EXCAVATORS

6. HIGHWAY TRUCKS

A. THE OPERATION OF THE MOBILE CRUSHING PLANT (CRUSHER) MAY SHALL TAKE PLACE ONLY DURING THE DAYTIME PERIOD (07:00 TO 19:00) AND SHALL COMPLY WITH THE FOLLOWING: I. THE CRUSHER IS TO BE LOCATED ON THE PIT FLOOR AT A MAXIMUM ELEVATION OF 188 METRES ABOVE SEA LEVEL IN

LOCATIONS SHOWN ON THE OPERATIONS SITE PLAN (PAGE 3 OF 5). II. NOISE BARRIERS ARE TO BE PROVIDED AS PER RECOMMENDED NOISE BARRIERS TABLE AND OPERATIONS SITE PLAN (PAGE 3 OF 5).

I. THE OPERATION OF THE LOADERS AND EXCAVATORS MAY TAKE PLACE DURING THE DAYTIME, EVENING AND NIGHTTIME PERIOD (24 HOURS) ANYWHERE IN THE EXTRACTION AREA.

I. THE LOADING AND SHIPPING OF PRODUCT USING HIGHWAY TRUCKS MAY TAKE PLACE DURING THE DAYTIME, EVENING AND NIGHTTIME PERIOD (24 HOURS) AND SHALL COMPLY WITH THE FOLLOWING: II. WHEN OPERATING ON-SITE, HIGHWAY TRUCKS SHALL NOT EXCEED 30 KM/H AND SHALL NOT USE COMPRESSION BRAKING

(JAKE BRAKES). 7. PORTABLE CONSTRUCTION EQUIPMENT

WATER REPORT AND AGENCY COMMENTS (MAY 19, 2023, JUNE 2, 2023 AND JUNE 5, 2023):

I. PORTABLE CONSTRUCTION EQUIPMENT USED FOR SITE PREPARATION (E.G. LAND CLEARING AND CONSTRUCTION OF BERMS) AND REHABILITATION SHALL COMPLY WITH MECP PUBLICATION NPC-115, CONSTRUCTION EQUIPMENT, AUGUST 1978. (THIS PUBLICATION GIVES NOISE STANDARDS TO BE MET BY CONSTRUCTION EQUIPMENT IN ONTARIO.) SITE PREPARATION AND REHABILITATION ACTIVITIES SHALL TAKE PLACE ONLY DURING DAYTIME HOURS (07:00 - 19:00). B. NEW PROCESS

I. IF A NEW PROCESS IS INTRODUCED TO THE SITE THAT IS NOT CURRENTLY INCLUDED IN THE SITE PLAN, THEN THIS PROCESS SHALL BE ASSESSED BY A QUALIFIED ACOUSTICAL CONSULTANT PRIOR TO COMMISSIONING. NOISE MITIGATION MEASURES SHALL BE REVIEWED, AND ALTERED IF NECESSARY, TO ENSURE THAT MECP SOUND LEVEL LIMITS ARE MET AT ALL POINTS OF RECEPTION AND THE SITE PLAN SHALL BE AMENDED AS REQUIRED BY MNRF.

PORTIONS OF THE STUDY AREA WITH ARCHAEOLOGICAL POTENTIAL (I.E., ARCHAEOLOGICAL EXCLUSION ZONE ON PAGE 3 OF 5) REQUIRE STAGE 2 ARCHAEOLOGICAL ASSESSMENT PRIOR TO DEVELOPMENT IMPACTS.

THE PURPOSE OF THE MONITORING PROGRAM IS TO MEASURE AND EVALUATE THE ACTUAL EFFECTS ON WATER RESOURCES ASSOCIATED WITH LONG TERM PIT DEVELOPMENT, AND TO ALLOW A COMPARISON BETWEEN THE ACTUAL EFFECTS MEASURED DURING THE MONITORING PROGRAM WITH THOSE PREDICTED AS PART OF THE IMPACT ASSESSMENT. THE GROUNDWATER AND SURFACE WATER MONITORING PROGRAM SHALL CONSIST OF THE FOLLOWING

1. QUARTERLY GROUNDWATER LEVEL MONITORING DURING PIT OPERATIONS, IN MONITORING WELLS MW20-1, MW20-2,

MW20-3, MW20-4, MW20-5 AND MW20-6 ONCE THE PIT IS OPERATING BELOW THE WATER TABLE. 2. ONCE THE PIT IS OPERATING BELOW THE WATER TABLE, DATALOGGERS TO MEASURE WATER LEVELS AND WATER TEMPERATURES ON A DAILY BASIS SHALL BE INSTALLED IN MONITORING WELLS MW20-6 AND MW20-03 AND SURFACE

WATER STATION SG-1. 3. ONCE THE PIT IS OPERATING BELOW THE WATER TABLE, MONITORING WELLS MW20-3 AND MW20-6 AND SURFACE WATER STATION SG-1 SHALL BE MONITORED/SAMPLED ON AN ANNUAL BASIS FOR THE FOLLOWING PARAMETERS (AS A MINIMUM): TEMPERATURE, PH, CONDUCTIVITY, TOTAL SUSPENDED SOLIDS, TOTAL DISSOLVED SOLIDS, ALKALINITY, TURBIDITY, AND

4. DURING THE OPERATIONAL PHASE, OBSERVATIONS OF THE PRESENCE/ABSENCE OF DIRECT FLOW FROM THE PIT POND SHALL BE A COMPONENT OF THE ROUTINE MONITORING PROGRAM. THE WATER LEVEL IN THE PIT POND, ONCE GROUND SURFACE ELEVATION POINT ALONG THE EASTERN LIMIT OF THE EXTRACTION AREA. IF THE WATER LEVEL AT THIS MONITORED LOCATION REACHES WITH 30 CENTIMETRES OF THE OVERFLOW INVERT ELEVATION, AN OUTFLOW STRUCTURE (WITH EROSION CONTROL) AND BAFFLES (TO MINIMIZE SEDIMENT TRANSPORT TO THE OUTFLOW LOCATION) SHALL BE CONSTRUCTED AT/NEAR THE OUTFLOW POINT. SAMPLING OF THE OUTFLOW DURING THE OPERATIONAL PHASE SHALL BE CONDUCTED, AND THESE SAMPLES SHALL BE ANALYZED FOR THE FOLLOWING PARAMETERS (AS A MINIMUM): TEMPERATURE, PH, CONDUCTIVITY, TOTAL SUSPENDED SOLIDS, TOTAL DISSOLVED SOLIDS, ALKALINITY, TURBIDITY, AND NUTRIENTS. DURING THE REHABILITATION PHASE, IF THERE IS A CONSISTENT DIRECT SURFACE WATER OUTFLOW FROM THE REHABILITATED PIT LAKE, AN OUTFLOW STRUCTURE WITH EROSION CONTROL SHALL BE CONSTRUCTED/RETAINED AT THE OUTFLOW LOCATION.

5. PRIOR TO COMMENCEMENT OF SITE OPERATIONS, GROUNDWATER SAMPLES SHALL BE COLLECTED FROM MONITORING WELLS MW20-1, MW20-2, MW20-3, MW20-4, MW20-5 AND MW20-6 AND THE SAMPLES SHALL BE ANALYZED FOR THE FOLLOWING PARAMETERS (AS A MINIMUM): TEMPERATURE, PH, CONDUCTIVITY, TOTAL SUSPENDED SOLIDS, TOTAL DISSOLVED SOLIDS, ALKALINITY, TURBIDITY, AND NUTRIENTS.

6. PRIOR TO COMMENCEMENT OF SITE OPERATIONS, A GROUNDWATER SEEP(S) IN THE AREA BETWEEN THE PROPOSED EXTRACTION LIMIT AND BARBERS LAKE SHALL BE SAMPLED AND A SURFACE WATER SAMPLE FROM BARBERS LAKE SHALL BE COLLECTED. THESE SAMPLES SHALL BE ANALYZED FOR THE FOLLOWING PARAMETERS (AS A MINIMUM): TEMPERATURE, PH, CONDUCTIVITY, TOTAL SUSPENDED SOLIDS, TOTAL DISSOLVED SOLIDS, ALKALINITY, TURBIDITY, AND NUTRIENTS.

7. PRIOR TO COMMENCEMENT OF SITE OPERATIONS, UP TO 5 PRIVATE WATER SUPPLY WELLS IN THE AREA OF THE SITE SHALL

THE FOLLOWING PARAMETERS (AS A MINIMUM): TEMPERATURE, PH, CONDUCTIVITY, TOTAL SUSPENDED SOLIDS, TOTAL

BE SAMPLED PROVIDED THAT OWNER CONSENT IS PROVIDED. THESE PRIVATE WELL SAMPLES SHALL BE ANALYZED FOR

DISSOLVED SOLIDS, ALKALINITY, TURBIDITY, AND NUTRIENTS. IN THE EVENT OF A WELL INTERFERENCE COMPLAINT, THE LICENSEE SHALL IMPLEMENT THE COMPLAINTS RESPONSE PROGRAM PRESENTED IN ATTACHMENT 3 TO THE WSP CANADA INC. AUGUST 3, 2023 LETTER RESPONSE TO THE MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS.

MINIMUM INSERTION LOSS FOR GENERATOR EXHAUST SILENCER

2. INSERTION LOSS BASED ON SILEX SILENCER MODEL JB 6.

	NAME	63		VE BAN IUM DYN 250				•	8000	RW
į	SILENCER TO BE INSTALLED AT THE GENERATOR EXHAUST ² (SOURCE: GENERATOR)	10	30	38	30	25	20	20	20	24

 OCTAVE BAND CENTRE FREQUENCY, HZ, WITH MINIMUM DYNAMIC INSERTION LOSS IN DB OR DBA UNITS RE 10-12 WATTS. ALTERNATIVE LEVELS AT EACH FREQUENCY BAND PERMISSIBLE PROVIDING THE OVERALL INSERTION LOSS MEETS THE OVERALL INSERTION LOSS (RW) AS NOTED ABOVE AND IS NOT TONAL IN HIGHLAND LINE PIT LOT 5, CONCESSION 10 GEOGRAPHIC TOWNSHIP OF DALHOUSIE TOWNSHIP OF LANARK HIGHLANDS. LANARK COUNTY, ONTARIO

SCALE 1:40,000 m

APPLICANT: THOMAS CAVANAGH CONSTRUCTION LIMITED 9094 CAVANAGH ROAD ASHTON, ONTARIO KOA 1B0

PIT LICENCE NO. 626599

KEY MAP

1. LICENCED AREA, HIGHLAND LINE PIT 37.6 HECTARES.

2. AREA OF OPERATION, HIGHLAND LINE PIT 28.4 HECTARES. 3. THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENSE FOR A PIT BELOW THE GROUND WATER TABLE

REFERENCE(S)

1. KEY PLAN: Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community.

THOMAS CAVANAGH CONSTRUCTION LIMITED

HIGHLAND LINE PIT

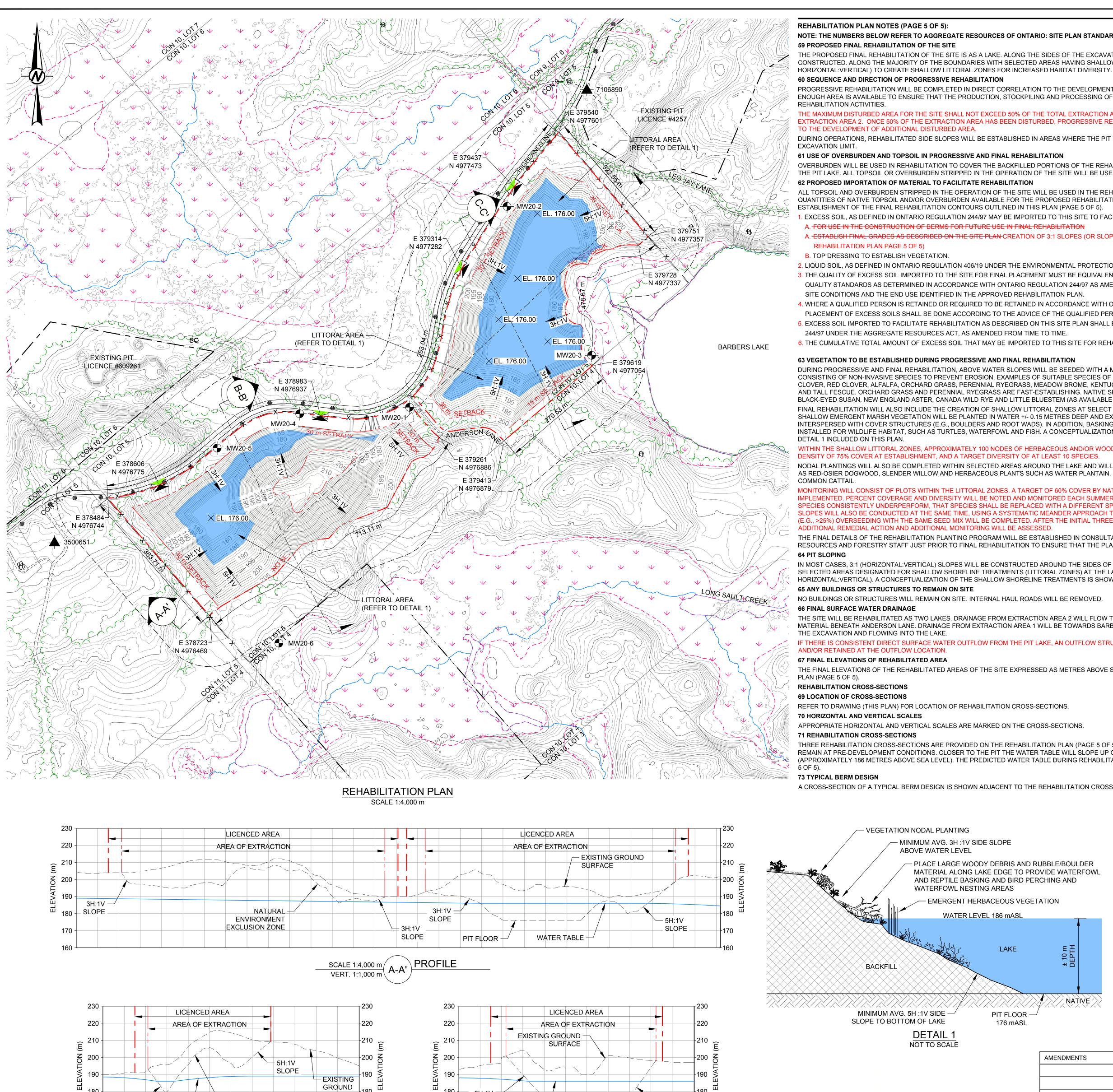
3. J. HENDERSON

OPERATIONS PLAN NOTES

APPLICANT CONSTRUCTION LIMITED

YYYY-MM-DD 2025-01-13 **DESIGNED** PREPARED JM KAM REVIEWED KAM APPROVED

PROJECT NO. CONTROL DRAWING REV. 4 OF 5 19126620 0014



SURFACE

- NATURAL

VERT. 1:1,000 m (B-B')

ENVIRONMENT

EXCLUSION ZONE

SECTION

SLOPE

WATER TABLE -

SCALE 1:4,000 m (C-C') SECTION

PIT FLOOR

3H:1V -

WATER TABLE -

SLOPE -

REHABILITATION PLAN NOTES (PAGE 5 OF 5):

NOTE: THE NUMBERS BELOW REFER TO AGGREGATE RESOURCES OF ONTARIO: SITE PLAN STANDARDS (AUGUST 2020)

59 PROPOSED FINAL REHABILITATION OF THE SITE

THE PROPOSED FINAL REHABILITATION OF THE SITE IS AS A LAKE. ALONG THE SIDES OF THE EXCAVATIONS, TYPICAL 3:1 (HORIZONTAL:VERTICAL) SLOPES WILL BE CONSTRUCTED. ALONG THE MAJORITY OF THE BOUNDARIES WITH SELECTED AREAS HAVING SHALLOWER SLOPES AT THE LAKE LEVEL (I.E., 5:1

60 SEQUENCE AND DIRECTION OF PROGRESSIVE REHABILITATION

PROGRESSIVE REHABILITATION WILL BE COMPLETED IN DIRECT CORRELATION TO THE DEVELOPMENT OF THE PIT AS THE EXTRACTION LIMITS ARE REACHED AND ENOUGH AREA IS AVAILABLE TO ENSURE THAT THE PRODUCTION, STOCKPILING AND PROCESSING OF AGGREGATE MATERIALS WILL NOT INTERFERE WITH

THE MAXIMUM DISTURBED AREA FOR THE SITE SHALL NOT EXCEED 50% OF THE TOTAL EXTRACTION AREA, WHICH INCLUDES BOTH EXTRACTION AREA 1 AND EXTRACTION AREA 2. ONCE 50% OF THE EXTRACTION AREA HAS BEEN DISTURBED, PROGRESSIVE REHABILITATION SHALL TAKE PLACE ON FINAL SIDE SLOPES PRIOR TO THE DEVELOPMENT OF ADDITIONAL DISTURBED AREA.

DURING OPERATIONS, REHABILITATED SIDE SLOPES WILL BE ESTABLISHED IN AREAS WHERE THE PIT HAS REACHED THE FINAL DEPTH AND HAS EXTENDED TO THE

61 USE OF OVERBURDEN AND TOPSOIL IN PROGRESSIVE AND FINAL REHABILITATION

OVERBURDEN WILL BE USED IN REHABILITATION TO COVER THE BACKFILLED PORTIONS OF THE REHABILITATED PIT AND THE ABOVE WATER SLOPES APPROACHING THE PIT LAKE. ALL TOPSOIL OR OVERBURDEN STRIPPED IN THE OPERATION OF THE SITE WILL BE USED IN THE REHABILITATION OF THE SITE.

- ALL TOPSOIL AND OVERBURDEN STRIPPED IN THE OPERATION OF THE SITE WILL BE USED IN THE REHABILITATION OF THE SITE. AS THERE WILL BE INSUFFICIENT QUANTITIES OF NATIVE TOPSOIL AND/OR OVERBURDEN AVAILABLE FOR THE PROPOSED REHABILITATION, SOIL AND ROCK MAY BE IMPORTED FOR USE IN THE ESTABLISHMENT OF THE FINAL REHABILITATION CONTOURS OUTLINED IN THIS PLAN (PAGE 5 OF 5).
- LEXCESS SOIL, AS DEFINED IN ONTARIO REGULATION 244/97 MAY BE IMPORTED TO THIS SITE TO FACILITATE THE FOLLOWING REHABILITATION:
- A. FOR USE IN THE CONSTRUCTION OF BERMS FOR FUTURE USE IN FINAL REHABILITATION A. ESTABLISH FINAL GRADES AS DESCRIBED ON THE SITE PLAN-CREATION OF 3:1 SLOPES (OR SLOPING RATIO OTHERWISE DESCRIBED ON THE FINAL
- REHABILITATION PLAN PAGE 5 OF 5)
- B. TOP DRESSING TO ESTABLISH VEGETATION.
- 2. LIQUID SOIL, AS DEFINED IN ONTARIO REGULATION 406/19 UNDER THE ENVIRONMENTAL PROTECTION ACT, IS NOT AUTHORIZED FOR IMPORTATION TO THE SITE. 3. THE QUALITY OF EXCESS SOIL IMPORTED TO THE SITE FOR FINAL PLACEMENT MUST BE EQUIVALENT TO OR MORE STRINGENT THAN THE APPLICABLE EXCESS SOIL QUALITY STANDARDS AS DETERMINED IN ACCORDANCE WITH ONTARIO REGULATION 244/97 AS AMENDED FROM TIME TO TIME AND MUST BE CONSISTENT WITH THE
- 4. WHERE A QUALIFIED PERSON IS RETAINED OR REQUIRED TO BE RETAINED IN ACCORDANCE WITH ONTARIO REGULATION 244/97, THE QUALITY, STORAGE, AND FINAL PLACEMENT OF EXCESS SOILS SHALL BE DONE ACCORDING TO THE ADVICE OF THE QUALIFIED PERSON.
- 5. EXCESS SOIL IMPORTED TO FACILITATE REHABILITATION AS DESCRIBED ON THIS SITE PLAN SHALL BE UNDERTAKEN IN ACCORDANCE WITH ONTARIO REGULATION 244/97 UNDER THE AGGREGATE RESOURCES ACT, AS AMENDED FROM TIME TO TIME.
- 6. THE CUMULATIVE TOTAL AMOUNT OF EXCESS SOIL THAT MAY BE IMPORTED TO THIS SITE FOR REHABILITATION PURPOSES IS 4,110,000 4,000,000 CUBIC METRES.

63 VEGETATION TO BE ESTABLISHED DURING PROGRESSIVE AND FINAL REHABILITATION

DURING PROGRESSIVE AND FINAL REHABILITATION, ABOVE WATER SLOPES WILL BE SEEDED WITH A MIX OF BUNCH AND SPREADING GRASSES AND FORBS CONSISTING OF NON-INVASIVE SPECIES TO PREVENT EROSION. EXAMPLES OF SUITABLE SPECIES OF GRASS AND FORBS INCLUDE, BUT ARE NOT LIMITED TO, WHITE CLOVER, RED CLOVER, ALFALFA, ORCHARD GRASS, PERENNIAL RYEGRASS, MEADOW BROME, KENTUCKY BLUEGRASS, CANADA BLUEGRASS, CREEPING RED FESCUE AND TALL FESCUE. ORCHARD GRASS AND PERENNIAL RYEGRASS ARE FAST-ESTABLISHING. NATIVE SPECIES WILL ALSO BE INCLUDED IN THE SEED MIX, SUCH AS BLACK-EYED SUSAN, NEW ENGLAND ASTER, CANADA WILD RYE AND LITTLE BLUESTEM (AS AVAILABLE FROM SUPPLIERS).

FINAL REHABILITATION WILL ALSO INCLUDE THE CREATION OF SHALLOW LITTORAL ZONES AT SELECT LOCATIONS TO CREATE MORE DIVERSE AQUATIC HABITAT. SHALLOW EMERGENT MARSH VEGETATION WILL BE PLANTED IN WATER +/- 0.15 METRES DEEP AND EXTEND +/-5 METRES FROM THE SHORE AND WILL BE INTERSPERSED WITH COVER STRUCTURES (E.G., BOULDERS AND ROOT WADS). IN ADDITION, BASKING LOGS, WOODY DEBRIS AND NESTING PLATFORMS WILL BE INSTALLED FOR WILDLIFE HABITAT, SUCH AS TURTLES, WATERFOWL AND FISH. A CONCEPTUALIZATION OF THE SHALLOW SHORELINE TREATMENTS IS SHOWN ON DETAIL 1 INCLUDED ON THIS PLAN.

WITHIN THE SHALLOW LITTORAL ZONES, APPROXIMATELY 100 NODES OF HERBACEOUS AND/OR WOODY WETLAND SPECIES WILL BE PLANTED WITH A TARGETED ENSITY OF 75% COVER AT ESTABLISHMENT, AND A TARGET DIVERSITY OF AT LEAST 10 SPECIES.

NODAL PLANTINGS WILL ALSO BE COMPLETED WITHIN SELECTED AREAS AROUND THE LAKE AND WILL INCLUDE EDGE, SUBMERGENT AND EMERGENT SPECIES SUCH AS RED-OSIER DOGWOOD, SLENDER WILLOW AND HERBACEOUS PLANTS SUCH AS WATER PLANTAIN, LAKE SEDGE, SWAMP MILKWEED, SOFTSTEM BULRUSH AND

IMPLEMENTED. PERCENT COVERAGE AND DIVERSITY WILL BE NOTED AND MONITORED EACH SUMMER FOR THREE YEARS AFTER PLANTING. SHOULD ANY WOODY SPECIES CONSISTENTLY UNDERPERFORM, THAT SPECIES SHALL BE REPLACED WITH A DIFFERENT SPECIES. A GENERAL ASSESSMENT OF THE UPLAND SEEDED SLOPES WILL ALSO BE CONDUCTED AT THE SAME TIME, USING A SYSTEMATIC MEANDER APPROACH TO COVER THE ENTIRE AREA. IF BARE SOILS ARE WIDESPREAD (E.G., >25%) OVERSEEDING WITH THE SAME SEED MIX WILL BE COMPLETED. AFTER THE INITIAL THREE YEARS OF THE MONITORING PROGRAM, THE NEED FOR ADDITIONAL REMEDIAL ACTION AND ADDITIONAL MONITORING WILL BE ASSESSED

THE FINAL DETAILS OF THE REHABILITATION PLANTING PROGRAM WILL BE ESTABLISHED IN CONSULTATION WITH MINISTRY OF NORTHERN DEVELOPMENT. NATURAL RESOURCES AND FORESTRY STAFF JUST PRIOR TO FINAL REHABILITATION TO ENSURE THAT THE PLAN IS APPROPRIATE FOR CONDITIONS AT THAT TIME.

IN MOST CASES, 3:1 (HORIZONTAL: VERTICAL) SLOPES WILL BE CONSTRUCTED AROUND THE SIDES OF THE PIT SO THAT IT CAN BE REHABILITATED AS A LAKE. SELECTED AREAS DESIGNATED FOR SHALLOW SHORELINE TREATMENTS (LITTORAL ZONES) AT THE LAKE LEVEL WILL BE SLOPED ACCORDINGLY (APPROXIMATELY 5:1 HORIZONTAL: VERTICAL). A CONCEPTUALIZATION OF THE SHALLOW SHORELINE TREATMENTS IS SHOWN ON DETAIL 1 INCLUDED ON THIS PLAN (PAGE 5 OF 5).

65 ANY BUILDINGS OR STRUCTURES TO REMAIN ON SITE NO BUILDINGS OR STRUCTURES WILL REMAIN ON SITE. INTERNAL HAUL ROADS WILL BE REMOVED

66 FINAL SURFACE WATER DRAINAGE

THE SITE WILL BE REHABILITATED AS TWO LAKES. DRAINAGE FROM EXTRACTION AREA 2 WILL FLOW TOWARDS EXTRACTION AREA 1 THROUGH THE UNEXTRACTED MATERIAL BENEATH ANDERSON LANE. DRAINAGE FROM EXTRACTION AREA 1 WILL BE TOWARDS BARBERS LAKE, DISCHARGING AT THE LOW POINT ON THE EDGE OF THE EXCAVATION AND FLOWING INTO THE LAKE.

IF THERE IS CONSISTENT DIRECT SURFACE WATER OUTFLOW FROM THE PIT LAKE, AN OUTFLOW STRUCTURE WITH EROSION CONTROL SHALL BE CONSTRUCTED AND/OR RETAINED AT THE OUTFLOW LOCATION.

67 FINAL ELEVATIONS OF REHABILITATED AREA

THE FINAL ELEVATIONS OF THE REHABILITATED AREAS OF THE SITE EXPRESSED AS METRES ABOVE SEA LEVEL ARE SHOWN ON THE DRAWING ON REHABILITATION

PLAN (PAGE 5 OF 5). **REHABILITATION CROSS-SECTIONS**

69 LOCATION OF CROSS-SECTIONS

REFER TO DRAWING (THIS PLAN) FOR LOCATION OF REHABILITATION CROSS-SECTIONS.

VEGETATION NODAL PLANTING

MINIMUM AVG. 3H:1V SIDE SLOPE

WATERFOWL NESTING AREAS

ABOVE WATER LEVEL

70 HORIZONTAL AND VERTICAL SCALES

APPROPRIATE HORIZONTAL AND VERTICAL SCALES ARE MARKED ON THE CROSS-SECTIONS

71 REHABILITATION CROSS-SECTIONS

BACKFILL

MINIMUM AVG. 5H:1V SIDE

DETAIL ^{*}

NOT TO SCALE

SLOPE TO BOTTOM OF LAKE

THREE REHABILITATION CROSS-SECTIONS ARE PROVIDED ON THE REHABILITATION PLAN (PAGE 5 OF 5). THE GROUNDWATER TABLE IN THE AREA OF THE PIT WILL REMAIN AT PRE-DEVELOPMENT CONDITIONS. CLOSER TO THE PIT THE WATER TABLE WILL SLOPE UP OR DOWN TO MEET THE ANTICIPATED PIT LAKE LEVEL

Z NÁTIVÉ /

AMENDMENTS

SIGNATURE

73 TYPICAL BERM DESIGN

A CROSS-SECTION OF A TYPICAL BERM DESIGN IS SHOWN ADJACENT TO THE REHABILITATION CROSS-SECTIONS (PAGE 5 OF 5).

- PLACE LARGE WOODY DEBRIS AND RUBBLE/BOULDER

AND REPTILE BASKING AND BIRD PERCHING AND

EMERGENT HERBACEOUS VEGETATION

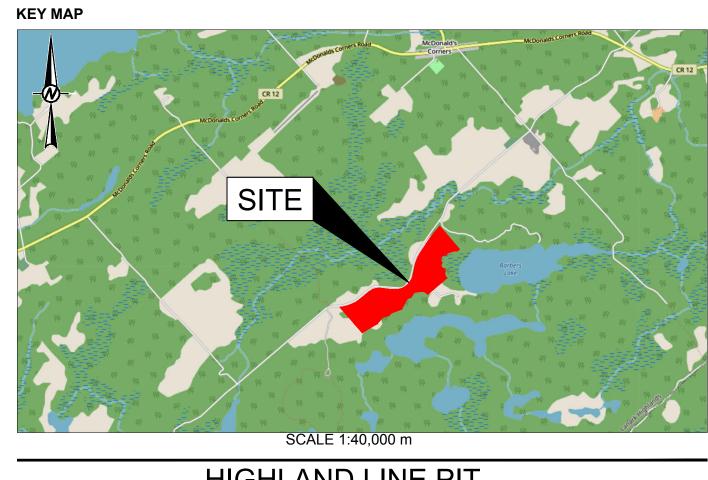
WATER LEVEL 186 mAS

MATERIAL ALONG LAKE EDGE TO PROVIDE WATERFOWL

LAKE

PIT FLOOR -

176 mASL



HIGHLAND LINE PIT LOT 5, CONCESSION 10 GEOGRAPHIC TOWNSHIP OF DALHOUSIE

TOWNSHIP OF LANARK HIGHLANDS, LANARK COUNTY, ONTARIO

APPLICANT: THOMAS CAVANAGH CONSTRUCTION LIMITED 9094 CAVANAGH ROAD ASHTON, ONTARIO

PIT LICENCE NO. 626599

KOA 1B0

1. LICENCED AREA, HIGHLAND LINE PIT **37.60** HECTARES.

- 2. AREA OF OPERATION, HIGHLAND LINE PIT 28.39 HECTARES. 3. THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A
- LICENCE FOR A PIT BELOW THE GROUND WATER TABLE 4. THIS PLAN WAS PREPARED USING PHOTOGRAMMETRIC METHODS FROM AERIAL
- PHOTOGRAPHS.
- 5. LOT, CONCESSION AND BOUNDARY LINES ON THIS PLAN ARE APPROXIMATE.
- 6. THIS IS NOT A LEGAL SURVEY DRAWING IN ACCORDANCE WITH THE PROVINCE OF ONTARIO SURVEYORS ACT 1987. THIS DRAWING WAS PRODUCED USING STANDARD PHOTOGRAMMETRIC PRACTICES.

LEGEND

—— — BOUNDARY OF AREA TO BE LICENCED —— - - — LIMIT OF EXTRACTION

— — — — — 120-METRE SURROUND

BOREHOLE / MONITORING WELL

PRIVATE WELL (AS PER MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS WATER WELL INFORMATION SYSTEM)

CON 10, LOT 5 LOTS AND CONCESSION LINES

CON 10, LOT 4

—— – ADJACENT PIT AND QUARRY BOUNDARY

UTILITY POLE

BUILDING; S-SILO, H-HOUSE, G-GARAGE, B-BARN, S-SHED, O-OFFICE, SC-SCALE HOUSE

ROAD: PAVED ·--- ROAD: GRAVEL

CONTOURS/INDEX CONTOURS

○.○.○.○.○ WOODED AREA

WATERCOURSE

____ WETLAND x — X PAGE WIRE FENCE/GATE



XEL. 176.00 PROPOSED PIT FLOOR SPOT ELEVATION, mASL

REFERENCE(S)

- KEY PLAN: Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
- 2. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS
- 3. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: UTM ZONE 18, VERTICAL DATUM: CGVD28

THOMAS CAVANAGH CONSTRUCTION LIMITED

HIGHLAND LINE PIT

B. J. HENDERSOI

01-13-25

01-13-25

DATE

01-13-25

DATE

DATE APPROVAL DATE

DATE

If With

SIGNATURE OF APPLICANT/LICENSEE

PREPARED UNDER THE DIRECTION OF:

CONSTRUCTION LIMITED

BRIAN HENDERSON

SITE PLANS APPROVED BY THE MINISTRY OF NATURAL RESOURCES AND FORESTRY

REHABILITATION PLAN

APPLICANT

YYYY-MM-DD 2025-01-13 **DESIGNED** PREPARED KAM REVIEWED APPROVED KAM

PROJECT NO. CONTROL **DRAWING** REV. 5 OF 5 19126620 0014