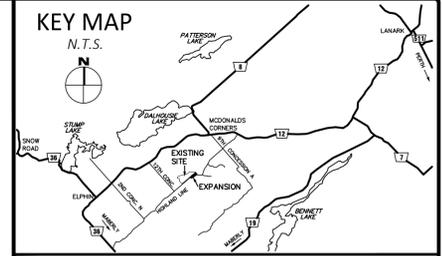


NOTE: THE TECHNICAL REPORT RECOMMENDATIONS AND ADAPTIVE MANAGEMENT PLAN WORDING HAVE BEEN MODIFIED TO MAKE CONDITIONS UNAMBIGUOUS AND ENFORCEABLE.



LOCATION OF SITE
 PART OF LOT 5&6, CONCESSION 10
 PART OF LOT 6 CONCESSION 11
 PART OF THE ROAD ALLOWANCE BETWEEN CONCESSIONS 10 & 11 IN LOT 6
 PART OF THE ROAD ALLOWANCE BETWEEN LOTS 5&6, CONCESSION 10
 GEOGRAPHIC TOWNSHIP OF DALHOUSIE
 TOWNSHIP OF LANARK HIGHLANDS
 LANARK COUNTY

APPLICANT AND PROPERTY OWNER
 ARNOTT BROS. CONSTRUCTION LTD.
 36 HWY 511, PERTH, ONTARIO
 K7H 3C9

JUNE.13.2025
 DATE
 MIKE CRAIN
 I HAVE THE AUTHORITY TO BIND THE CORPORATION

PLAN CERTIFICATION
 I HEREBY CERTIFY THAT THIS SITE PLAN WAS PRODUCED UNDER MY SUPERVISION.

JUNE.13.2025
 DATE
 MARK PRIDDLE, P.GEO.

AREAS

DESCRIPTION	AREA(ha)
EXISTING LICENCE AREA	34.3
EXPANSION LICENCE AREA	5.8
NEW TOTAL LICENCE AREA	40.1
NEW TOTAL EXTRACTION AREA	20.1

BOUNDARIES
 ANY BOUNDARY AND/OR TITLE AREA INFORMATION SHOWN ON THIS SITE PLAN IS COMPILED FROM THE SOURCES RECTED ON THE DRAWINGS, FOR THE PURPOSES OF PRODUCING A SITE PLAN UNDER THE AGGREGATE RESOURCES ACT. EGIS DOES NOT CERTIFY THAT THE BOUNDARIES OF THE PROPERTIES SHOWN ON THIS PLAN ARE ACCURATE WITHIN THE MEANING OF THE SURVEYS ACT. PROPER LEGAL SURVEY RE-ESTABLISHMENT OF ANY BOUNDARY LOCATIONS OF PROPERTIES ON THIS PLAN MUST BE COMPLETED BY AN ONTARIO LAND SURVEYOR WORKING WITHIN THE SURVEYS ACT, SURVEYOR'S ACT, AND LAND TITLES OR REGISTRY ACT AND REGULATIONS MADE THEREUNDER.

No.	Amendments	Date

Check and verify all dimensions before proceeding with the work Do not scale drawings

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Client:
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 36 HWY 511, PERTH, ONTARIO, K7H 3C9

Project:
McKINNON PIT
LICENCE No. 609261
CLASS "A" PIT BELOW WATER

Drawing Title:
MITIGATION MEASURES AND MONITORING PROGRAMS FROM TECHNICAL REPORTS

Scale: N/A	Project Number: CCO-22-1194
Drawn by: SH	
Checked By: MP	Drawing Number: 05
Date: JUNE.13.2025	Sheet 5 of 5

STAGE 2 ARCHAEOLOGICAL ASSESSMENT FOR MCKINNON PIT:

6.5 STAGE 2 RECOMMENDATIONS

THIS REPORT FORMS THE BASIS FOR THE FOLLOWING RECOMMENDATIONS:

- IT HAS BEEN DETERMINED THAT THE CULTURAL HERITAGE VALUE, OR INTEREST, OF THE STUDY AREA HAS BEEN SUFFICIENTLY DOCUMENTED THROUGH THE STAGE 2 RESEARCH CONDUCTED TO DATE, AND NO FURTHER ARCHAEOLOGICAL ASSESSMENT OF THE SUBJECT AREA AS PRESENTLY DEFINED ON MAP 2 IS REQUIRED.

THE READER IS ALSO REFERRED TO SECTION 7.0 BELOW TO ENSURE COMPLIANCE WITH RELEVANT PROVINCIAL LEGISLATION AS IT MAY RELATE TO THIS PROJECT.

SECTION 7 ADVICE ON COMPLIANCE WITH LEGISLATION

IN ORDER TO ENSURE COMPLIANCE WITH PROVINCIAL LEGISLATION, THE READER IS ADVISED OF THE FOLLOWING:

- THIS REPORT WAS SUBMITTED TO THE MINISTER OF HERITAGE, SPORT, TOURISM AND CULTURE INDUSTRIES AS A CONDITION OF LICENSING IN ACCORDANCE WITH PART VI OF THE ONTARIO HERITAGE ACT, R.S.O. 1990, C.0.18. THE REPORT IS REVIEWED TO ENSURE THAT IT COMPLIES WITH THE STANDARDS AND GUIDELINES THAT ARE ISSUED BY THE MINISTER, AND THAT THE ARCHAEOLOGICAL FIELDWORK AND REPORT RECOMMENDATIONS ENSURE THE CONSERVATION, PROTECTION AND PRESERVATION OF THE CULTURAL HERITAGE OF ONTARIO. WHEN ALL MATTERS RELATING TO ARCHAEOLOGICAL SITES WITHIN THE PROJECT AREA OF A DEVELOPMENT PROPOSAL HAVE BEEN ADDRESSED TO THE SATISFACTION OF THE MINISTRY OF HERITAGE, SPORT, TOURISM AND CULTURE INDUSTRIES, A LETTER WILL BE ISSUED BY THE MINISTRY STATING THAT THERE ARE NO FURTHER CONCERNS WITH REGARD TO ALTERATIONS TO ARCHAEOLOGICAL SITES BY THE PROPOSED DEVELOPMENT.
- IT IS AN OFFENCE UNDER SECTIONS 48 AND 69 OF THE ONTARIO HERITAGE ACT FOR ANY PARTY OTHER THAN A LICENSED ARCHAEOLOGIST TO MAKE ANY ALTERATION TO A KNOWN ARCHAEOLOGICAL SITE OR TO REMOVE ANY ARTIFACT OR OTHER PHYSICAL EVIDENCE OF PAST HUMAN USE OR ACTIVITY FROM THE SITE, UNTIL SUCH TIME AS A LICENSED ARCHAEOLOGIST HAS COMPLETED ARCHAEOLOGICAL FIELDWORK ON THE SITE, SUBMITTED A REPORT TO THE MINISTER STATING THAT THE SITE HAS NO FURTHER CULTURAL HERITAGE VALUE OR INTEREST, AND THE REPORT HAS BEEN FILED IN THE ONTARIO PUBLIC REGISTER OF ARCHAEOLOGICAL REPORTS REFERRED TO IN SECTION 65.1 OF THE ONTARIO HERITAGE ACT.
- SHOULD PREVIOUSLY UNDOCUMENTED ARCHAEOLOGICAL RESOURCES BE DISCOVERED, THIS WOULD BE CONSIDERED A NEW ARCHAEOLOGICAL SITE AND THEREFORE SUBJECT TO SECTION 48 (1) OF THE ONTARIO HERITAGE ACT. THE PROPONENT OR PERSON DISCOVERING THE ARCHAEOLOGICAL RESOURCES SHALL CEASE ALTERATION OF THE SITE IMMEDIATELY AND ENGAGE A LICENSED CONSULTANT ARCHAEOLOGIST TO CARRY OUT ARCHAEOLOGICAL FIELDWORK, IN COMPLIANCE WITH SECTION 48 (1) OF THE ONTARIO HERITAGE ACT.
- THE FUNERAL, BURIAL AND CREMATION SERVICES ACT, 2002, S.O. 2002, C.33 REQUIRES THAT ANY PERSON DISCOVERING HUMAN REMAINS SHALL NOTIFY THE POLICE OR CORONER AND THE REGISTRAR OF CEMETERIES AT THE MINISTRY OF CONSUMER SERVICES. THE FOLLOWING FIRST NATIONS COMMUNITIES SHALL BE NOTIFIED IMMEDIATELY:
 - ALGONQUIN'S OF PIKWAKANAGAN EMAIL: consultation@pikwakanagan.ca
 - ALDERVILLE FIRST NATION EMAIL: jkapyrka@alderville.ca
- ARCHAEOLOGICAL SITES RECOMMENDED FOR FURTHER ARCHAEOLOGICAL FIELDWORK OR PROTECTION REMAIN SUBJECT TO SECTION 48 (1) OF THE ONTARIO HERITAGE ACT AND SHALL NOT BE ALTERED, OR HAVE ARTIFACTS REMOVED FROM THEM, EXCEPT BY A PERSON HOLDING AN ARCHAEOLOGICAL LICENCE.

HYDROGEOLOGICAL ASSESSMENT LEVEL 1 AND LEVEL 2 WATER REPORT, MONITORING CONDITIONS AND RECOMMENDATIONS:

12 RECOMMENDATIONS

NO IMPACTS ARE ANTICIPATED FROM THE OPERATION AS PROPOSED. A GROUNDWATER MONITORING PROGRAM SHALL BE IMPLEMENTED FOR SEVERAL YEARS TO SUPPORT THE IMPACT ASSESSMENT AND PROVIDE DATA TO PROTECT BOTH ARNOTT AND SURROUNDING GROUNDWATER AND SURFACE WATER INTERESTS. PIEZOMETERS TW-01, TW-02 AND TW-03 WERE POSITIONED AS SENTRY WELLS BETWEEN THE PROPOSED OPERATION AND NEIGHBOURING GROUNDWATER USERS. THEY WILL BE USED TO CONFIRM THE DATA ANALYSES, PROVIDE CONTINUED GROUNDWATER ASSESSMENT AND MONITOR GROUNDWATER QUALITY. IF THE OWNER IS WILLING TO PARTICIPATE, THE WELL AT 1121 HIGHLAND LINE WILL BE INCLUDED IN THE GROUNDWATER MONITORING PROGRAM. CONTACT AND RESPONSE FROM THIS LANDOWNER SHALL BE DOCUMENTED FOR THE INITIAL MONITORING REPORT.

12.1 GROUNDWATER AND SURFACE WATER LEVEL MONITORING

WATER LEVELS SHALL BE RECORDED BEFORE OPERATIONS BEGIN EACH YEAR, AND ON ALTERNATE MONTHS THROUGH THE OPERATING SEASON UP TO ONE MONTH AFTER THE SEASON ENDS. THE WELL AT 1121 WILL BE MONITORED AND A DATA LOGGER WILL BE INSTALLED TO MINIMIZE INTRUSION INTO THE WELL. THE DATA WILL BE DOWNLOADED WHEN THE FIRST WATER LEVEL IS MEASURED AT THE PIT IN THE SPRING, AND EVERY THREE MONTHS THROUGH UNTIL THE FINAL READING FOR THE SEASON.

AFTER TWO YEARS, IF A REPRESENTATIVE BASELINE HAS BEEN ESTABLISHED, RECOMMENDATIONS WILL BE MADE FOR CHANGES TO THE MONITORING PROGRAM, INCLUDING THE NECESSITY TO CONTINUE IT, UNTIL BELOW WATER EXCAVATION BEGINS. WHEN BELOW WATER EXCAVATION BEGINS, THE GROUNDWATER MONITORING PROGRAM DESCRIBED ABOVE SHALL BE REPEATED AS A MINIMUM (I.E. ASSUMING NO CHANGES HAVE RESULTED FROM THE ORIGINAL PROGRAM). A STAFF GAUGE SHALL BE INSTALLED IN THE POND, AND MONTHLY WATER LEVEL MEASUREMENTS SHALL BE RECORDED ON THE SAME DAY AS THE GROUNDWATER LEVELS. AS THE LAKE EXPANDS, IT MAY BE BENEFICIAL TO INSTALL A SECOND STAFF GAUGE TO RECORD THE CHANGE IN WATER LEVEL ACROSS THE OPEN SURFACE. FOR THE LONG-TERM, DATA LOGGERS SHALL BE INSTALLED TO MONITOR THE WATER LEVELS IN THE PONDS. WHEN MEASUREMENTS ARE TAKEN, OBSERVATIONS AND/OR PHOTOS OF THE SITE ACTIVITY SHALL BE RECORDED. WEATHER CONDITIONS ON, AND FOR TWO OR THREE DAYS BEFORE THE MONITORING, WILL ALSO BE NOTED. WHEN THE MONITORING OF THE BELOW WATER EXCAVATION BEGINS, THE DATA SHALL BE CHECKED BY A QUALIFIED PROFESSIONAL AS THE MEASUREMENTS ARE TAKEN. AN ANNUAL REVIEW OF THE DATA SHALL BE PREPARED ANNUALLY BY A QP. DURING THE ANNUAL REVIEW, RECOMMENDATIONS SHALL BE MADE FOR CHANGES TO THE MONITORING PROGRAM. THE REVIEWS SHALL BE KEPT AT THE COMPANY OFFICE FOR FUTURE REFERENCE.

12.1.1 OFF-SITE GROUNDWATER USERS

SITE SPECIFIC INFORMATION ON THE WELLS AT 1025, 1101 AND 1121 HIGHLAND LINE SHALL BE DOCUMENTED THROUGH A WELL INTERVIEW BEFORE EXCAVATION INTO THE EXPANSION BEGINS. THE SURVEY WILL DOCUMENT THE PROPERTY SETTING, WELL LOCATION AND CONSTRUCTION, AND CONFIRM THE WATER WELL RECORD MATCH IF POSSIBLE. A WATER SAMPLE SHALL BE TAKEN TO ESTABLISH BASELINE WATER QUALITY. AS WITH THE BASELINE GROUNDWATER MONITORING, THE PRE-OPERATIONS SAMPLE PROVIDES A REFERENCE FOR FUTURE USE. THE RECOMMENDED LIST FOR BASELINE AND ANY FUTURE WATER QUALITY ANALYSIS IS FOUND IN TABLE 6.

SUPPLEMENTARY RECOMMENDATIONS

- THE BELOW WATER EXTRACTION SHALL BEGIN AT THE MOST DISTANT POINT FROM THE WETLAND THAT IS REASONABLE FOR THE SITE OPERATION. SEE LOCATION OF COMMENCEMENT OF BELOW WATER EXTRACTION ON THE OPERATIONS PLAN AND NOTE 43. AS THE SITE PROGRESSES, THE MONITORING DATA WILL BE INTERPRETED SO THAT IF IMPACTS ARE PREDICTED, MEASURES SHALL BE IMPLEMENTED THAT WILL INCLUDE REDUCING EXCAVATION DEPTH OR PROXIMITY TO THE NATURAL FEATURE. THIS ASSESSMENT SHALL BE BASED ON THE MONITORING DATA.
- THE TEMPERATURE IN TW2, TW8, TW9 AND TW10 SHALL CONTINUE TO BE MEASURED USING DATALOGGERS. THE DATA SHALL BE DOWNLOADED WHEN SEASONAL FIELD MEASUREMENTS ARE TAKEN, AND THE DATA SHALL BE CHECKED FOR TRENDS AND POTENTIAL CONCERNS. TW2 WILL BE A SENTRY TO MONITOR CHANGES TO THE GROUNDWATER IN THE PIT FROM THE OPEN WATER.
- FIELD MONITORING OF THE SURFACE WATER STATIONS SHALL CONTINUE AT THE SAME FREQUENCY AS THE GROUNDWATER MONITORING. IF PERMISSION IS GRANTED, STATIONS SW1, SW2 AND SW3 SHALL BE INCLUDED IN THE PROGRAM. IF PERMISSION IS NOT GRANTED, MONITORING SHALL CONTINUE AT SW-E51 ALONG WITH SW4, ALTHOUGH THE IMPACT WILL NOT BE AS EASY TO ASSESS. THE RESULTS AND ASSESSMENT SHALL BE PART OF THE PREVIOUSLY RECOMMENDED REPORTING.
- MONITORING DATA SHALL BE REVIEWED ANNUALLY BY A QUALIFIED PROFESSIONAL. IF A NEGATIVE IMPACT IS IDENTIFIED AT ANY TIME DURING OPERATION OR REPORTING, OPERATIONS BELOW WATER TABLE SHALL CEASE IMMEDIATELY. THE SPECIALIST SHALL THOROUGHLY ASSESS THE IMPACT AND OPERATIONS SHALL BE AMENDED BEFORE ANY FURTHER EXTRACTION BELOW WATER TABLE CONTINUES.

NATURAL ENVIRONMENT REPORT

2. SUMMARY OF MITIGATION RECOMMENDATIONS SPECIES AT RISK (SAR)

AS A GENERAL PRECAUTION FOR AVOIDING HARM TO SAR BATS, NO TREES SHALL BE REMOVED DURING THE MATERNITY/ROOST SEASON (APRIL 15 TO SEPT. 15).

TO HELP REDUCE SIGHT AND SOUND IMPACTS TO EASTERN MEADOWLARKS USING THE FIELDS SOUTH OF HIGHLAND LINE ROAD, EXTRACTION WILL PROCEED FROM THE NORTH TO THE SOUTH TOWARDS HIGHLAND LINE ROAD, SUCH THAT EXTRACTION MACHINERY WILL BE MOSTLY OUT OF SIGHT BEHIND THE HEIGHT OF THE AGGREGATE FACE, AND THE REQUIRED ROADSIDE BERM.

A SEASONAL CATEGORY 2 EXTRACTION RESTRICTION BOUNDARY FROM APRIL 15 TO JULY 31 (AFTER WEIR 2008) IS REQUIRED AT THE SOUTHWEST END OF THE EXISTING LICENCE AREA TO PROVIDE AN EXTRA LAYER OF DISTURBANCE MINIMIZATION FOR EASTERN WHIP-POOR-WILL (SEE PG. 15 IMAGE). WHIP-POOR-WILL SURVEYS WILL NEED TO BE CONDUCTED IF PIT OPERATORS ARE INTERESTED IN BYPASSING THIS TIMING BOUNDARY DURING ANY PARTICULAR YEAR. HOWEVER, IT COULD BE AS MANY AS 20 YEARS BEFORE PIT ACTIVITY GETS WITHIN THIS CATEGORY 2 AREA AND IF IT IS DETERMINED THAT WHIP-POOR-WILLS ARE NOT PRESENT AT THAT TIME, OR ARE NO LONGER CONSIDERED A SAR, WE SEE NO NEED FOR A SEASONAL RESTRICTION BOUNDARY DURING THAT PARTICULAR YEAR. THE PIT OPERATORS WILL BE REQUIRED TO REGISTER THEIR PIT ACTIVITY WITH THE MECF DUE TO THE BANK SWALLOW NESTING TAKING PLACE HERE AND WE RECOMMEND THEY DO SO.

WETLAND

ON TOP OF THE REQUIRED 30 M MVCA WETLAND BUFFER, A FURTHER 15 M BUFFER SHALL BE ADDED AT THE NORTHWEST CORNER OF THE EXISTING LICENCE BOUNDARY, FOR A TOTAL 45 M (SEE PG. 18 IMAGE). THE OPEN WATER CREATED AS PART OF THE REHABILITATION PLAN HAVE SLOPING EDGES TO ENHANCE THE CREATION OF LITTORAL ZONE HABITAT, AND THAT SEVERAL SMALL ISLANDS BE CREATED THAT COULD SUPPORT HABITAT TO SPECIES SUCH AS WATERFOWL AND TURTLES.

WOODLAND

ALL WOODED PORTIONS BORDERING THE WETLAND TO THE NORTH AND WEST OF THE EXISTING PIT LICENCE AREA BE MAINTAINED AS WOODLAND.

WILDLIFE HABITAT

TO PROTECT PAINTED TURTLE NESTING THAT OCCURS BESIDE THE CURRENT EXTRACTION AREA TURTLE FENCING (SEE MNR 2013) SHALL BE INSTALLED AT THE EDGE OF THE UNVEGETATED AREA (SEE PAGE 23). THE DIVIDING LINE BETWEEN UNVEGETATED AND VEGETATED AREAS IS DISTINCT IN GOOGLE MAPS. NO EXCAVATION SHALL OCCUR NORTH OF THE TURTLE FENCING.

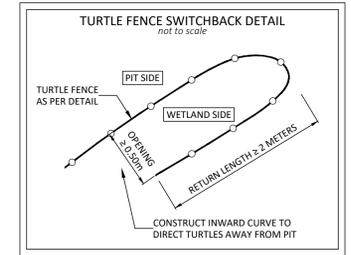
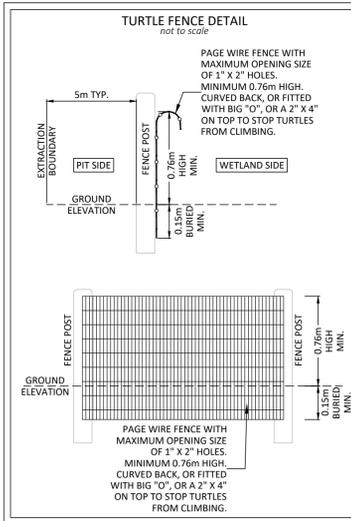
NOTE OF CAUTION

IF THE PROPOSED BELOW WATER TABLE EXPANSION WERE TO SIGNIFICANTLY ALTER THE HYDROLOGICAL REGIME OF THE ADJACENT WETLAND, THIS COULD RESULT IN SIGNIFICANT IMPACTS TO THE WETLAND, TO FISH HABITAT, AND TO SIGNIFICANT WILDLIFE HABITAT. IT IS OUR UNDERSTANDING THAT THE HYDROLOGICAL REGIME WILL NOT BE IMPACTED, BUT WE DEFER TO THE REPORT BY GORRELL (2022) IN THIS REGARD. THERE IS POTENTIAL FOR A NET ECOLOGICAL BENEFIT FROM THE CREATION OF AN AQUATIC FEATURE HERE AS PART OF THE CLOSURE PLANS RESULTING IN MORE WETLAND HABITAT, MORE SIGNIFICANT WILDLIFE HABITAT, MORE FISH HABITAT, AND POSSIBLY NEW SAR HABITAT.

SUPPLEMENTAL CONDITION

ONCE OPERATIONS COMMENCE BELOW WATER TABLE A SITE VISIT AND REPORT SHALL BE PREPARED BY A QUALIFIED PROFESSIONAL EVERY OTHER YEAR TO ASSESS THE FOLLOWING:

- FEATURES AND FUNCTIONS OF THE CURRENT DISTURBED AND REHABILITATED AREAS OF THE PIT, THE MAN-MADE LAKE EDGE AND THE ADJACENT WETLAND BUFFER ZONE AND PROVIDE RECOMMENDATIONS FOR;
- REPORT ON THE CONTROL OF INVASIVE SPECIES ALONG THE WETLAND EDGE (EG. REMOVAL OF SPOTTED KNAPWEED); AND
- RECOMMEND PLANTINGS CONSISTENT WITH THE VEGETATION LISTED ON THE SITE PLAN (DRAWING #03).



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