



EXISTING FEATURES - GENERAL SCALE 1:2 mm

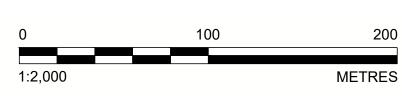
EXISTING FEATURES - GENERAL (PAGE 1 OF 5)

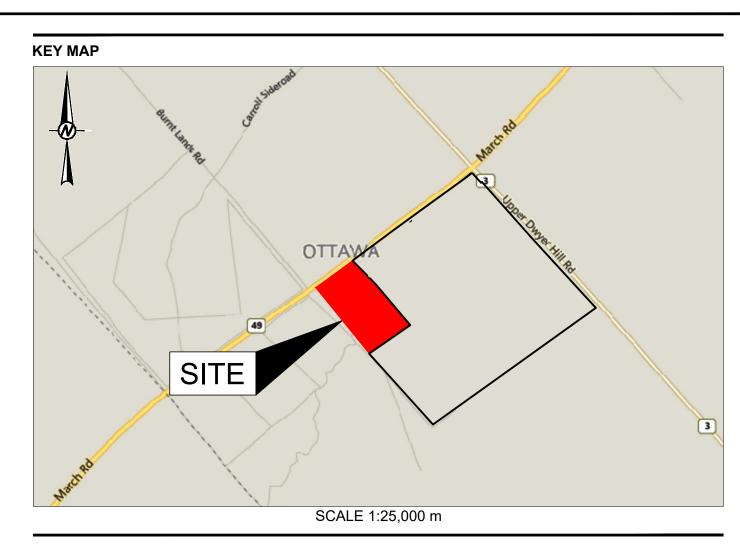
NOTE: THE NUMBERS BELOW REFER TO AGGREGATE RESOURCES OF ONTARIO: SITE PLAN STANDARDS (AUGUST 2020) 16 EXISTING ZONING

THE EXISTING ZONING OF LAND ON AND WITHIN 120 METRES OF THE SITE IS SHOWN ON THIS PLAN (PAGE 1 0F 5).

SIGNATURE OF APPLICANT/LICENSEE PREPARED UNDER THE DIRECTION OF: JAIME OXTOBEE **THOMAS**

CONSTRUCTION LIMITED





WEST CARLETON QUARRY EXTENSION PART OF LOT 15, CONCESSION 11 FORMER GEOGRAPHIC TOWNSHIP OF HUNTLEY,

CITY OF OTTAWA

APPLICANT: THOMAS CAVANAGH CONSTRUCTION LIMITED 9094 CAVANAGH ROAD ASHTON, ONTARIO K0A 1B0

QUARRY LICENSE NO. 626555

- 1. LICENCED AREA, WEST CARELTON QUARRY EXTENSION 18.2 HECTARES.
- 2. AREA OF OPERATION, WEST CARELTON QUARRY EXTENSION 16.5 HECTARES. 3. THIS SITE PLAN IS PREPARED FOR SUBMISSION TO THE MINISTRY OF NATURAL RESOURCES AND FORESTRY IN CONJUNCTION WITH AN APPLICATION FOR A CLASS 'A'
- QUARRY BELOW WATER UNDER THE AGGREGATE RESOURCES ACT AND REGULATIONS. 4. THIS PLAN WAS PREPARED USING PHOTOGRAMMETRIC METHODS FROM AERIAL
- 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 12, LOT 15 CON 12, LOT 14 LOTS AND CONCESSION LINES

ME[725r] LAND ZONING BY-LAW

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

UTILITY POLE

PRIMARY ENTRANCE

PRIMARY EXIT

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
- PRINTER 2016. 3. CITY OF OTTAWA 2012 TOPO LIDAR TILES.
- 4. MAPPING AND GROUND CONTROL FOR THE SITE PLAN COMES FROM LAND INFORMATION ONTARIO (LIO) DATA AVAILABLE FROM THE MINISTRY OF NATURAL RESOURCES AND FORESTRY, CITY OF OTTAWA 2012 TOPO LIDAR TILES AND A GROUND SURVEY CONDUCTED BY CAVANAGH IN NOVEMBER 2019. THE BACKGROUND AERIAL IMAGE ON PLAN 1 OF 5 (EXISTING FEATURES - GENERAL) IS FROM THE CITY OF OTTAWA 2017 AERIAL MAPPING AND WAS EXPORTED FROM GEOOTTAWA.
- 5. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28.

THOMAS CAVANAGH CONSTRUCTION LIMITED

WEST CARLETON QUARRY EXTENSION

PROJECT NO.

1899975

EXISTING FEATURES - GENERAL

APPLICANT YYYY-MM-DD DESIGNED **CONSTRUCTION LIMITED**

CONTROL

0009

PREPARED JM REVIEWED JPAO KAM APPROVED REV. **FIGURE** 1 OF 5

2021-02-17

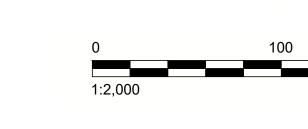
LAND USE / ZONING CITY OF OTTAWA BY-LAW NO. 2008-250 CONSOLIDATION ENVIRONMENTAL PROTECTION ZONE SUBZONE 3

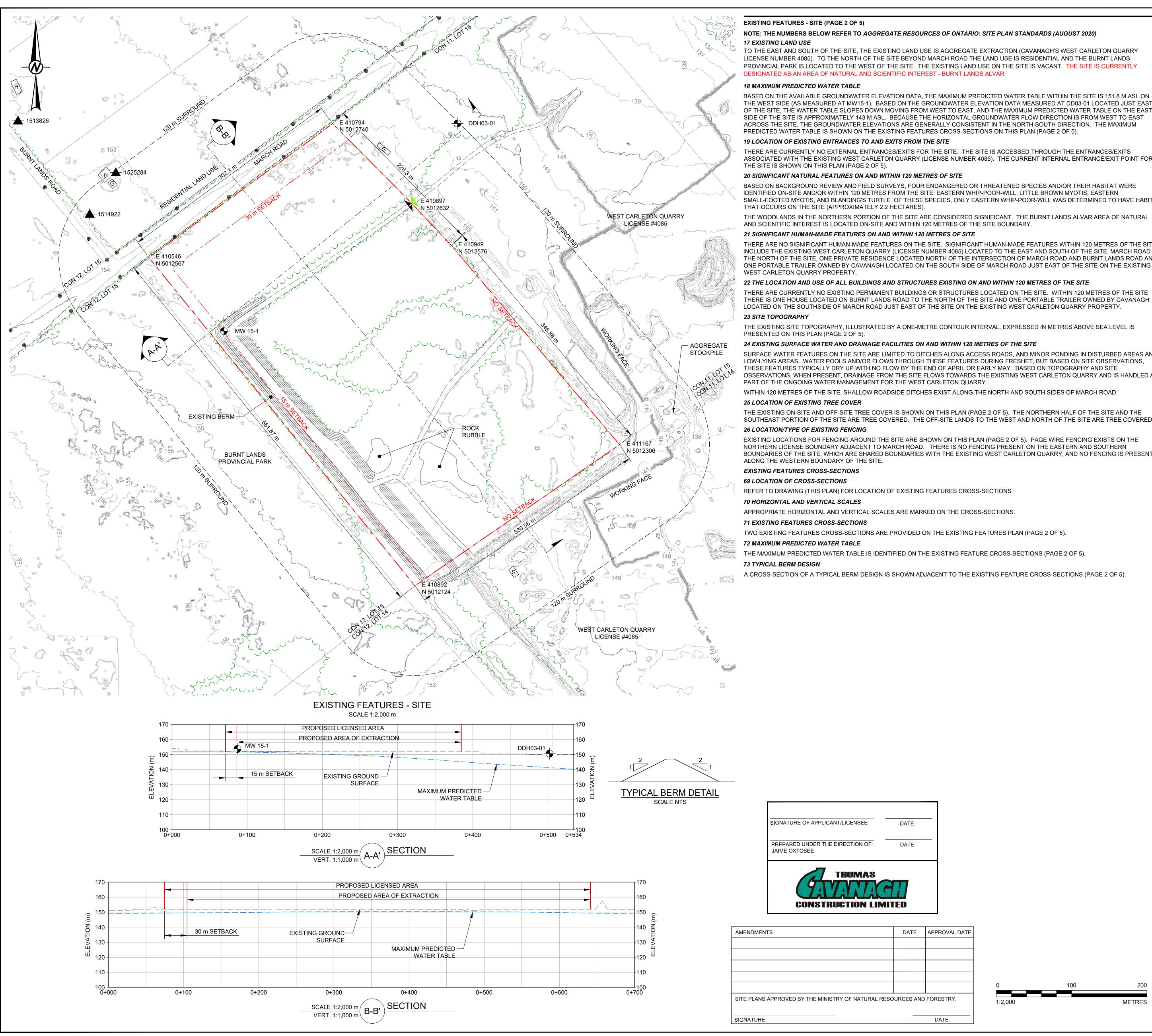
MINERAL EXTRACTION ZONE **RURAL EXCEPTION 725**

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

DATE APPROVAL DATE

AMENDMENTS





EXISTING FEATURES - SITE (PAGE 2 OF 5)

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

TO THE EAST AND SOUTH OF THE SITE, THE EXISTING LAND USE IS AGGREGATE EXTRACTION (CAVANAGH'S WEST CARLETON QUARRY LICENSE NUMBER 4085). TO THE NORTH OF THE SITE BEYOND MARCH ROAD THE LAND USE IS RESIDENTIAL AND THE BURNT LANDS PROVINCIAL PARK IS LOCATED TO THE WEST OF THE SITE. THE EXISTING LAND USE ON THE SITE IS VACANT. THE SITE IS CURRENTLY DESIGNATED AS AN AREA OF NATURAL AND SCIENTIFIC INTEREST - BURNT LANDS ALVAR.

18 MAXIMUM PREDICTED WATER TABLE

THE WEST SIDE (AS MEASURED AT MW15-1). BASED ON THE GROUNDWATER ELEVATION DATA MEASURED AT DD03-01 LOCATED JUST EAST OF THE SITE, THE WATER TABLE SLOPES DOWN MOVING FROM WEST TO EAST, AND THE MAXIMUM PREDICTED WATER TABLE ON THE EAST SIDE OF THE SITE IS APPROXIMATELY 143 M ASL. BECAUSE THE HORIZONTAL GROUNDWATER FLOW DIRECTION IS FROM WEST TO EAST ACROSS THE SITE, THE GROUNDWATER ELEVATIONS ARE GENERALLY CONSISTENT IN THE NORTH-SOUTH DIRECTION. THE MAXIMUM PREDICTED WATER TABLE IS SHOWN ON THE EXISTING FEATURES CROSS-SECTIONS ON THIS PLAN (PAGE 2 OF 5).

19 LOCATION OF EXISTING ENTRANCES TO AND EXITS FROM THE SITE

THERE ARE CURRENTLY NO EXTERNAL ENTRANCES/EXITS FOR THE SITE. THE SITE IS ACCESSED THROUGH THE ENTRANCES/EXITS ASSOCIATED WITH THE EXISTING WEST CARLETON QUARRY (LICENSE NUMBER 4085). THE CURRENT INTERNAL ENTRANCE/EXIT POINT FOR THE SITE IS SHOWN ON THIS PLAN (PAGE 2 OF 5).

20 SIGNIFICANT NATURAL FEATURES ON AND WITHIN 120 METRES OF SITE

BASED ON BACKGROUND REVIEW AND FIELD SURVEYS, FOUR ENDANGERED OR THREATENED SPECIES AND/OR THEIR HABITAT WERE IDENTIFIED ON-SITE AND/OR WITHIN 120 METRES FROM THE SITE: EASTERN WHIP-POOR-WILL, LITTLE BROWN MYOTIS, EASTERN SMALL-FOOTED MYOTIS, AND BLANDING'S TURTLE, OF THESE SPECIES, ONLY EASTERN WHIP-POOR-WILL WAS DETERMINED TO HAVE HABITAT

THE WOODLANDS IN THE NORTHERN PORTION OF THE SITE ARE CONSIDERED SIGNIFICANT. THE BURNT LANDS ALVAR AREA OF NATURAL AND SCIENTIFIC INTEREST IS LOCATED ON-SITE AND WITHIN 120 METRES OF THE SITE BOUNDARY

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 THE EXISTING WEST CARLETON QUARRY (LICENSE NUMBER 4085) LOCATED TO THE EAST AND SOUTH OF THE SITE. MARCH ROAD TO THE NORTH OF THE SITE, ONE PRIVATE RESIDENCE LOCATED NORTH OF THE INTERSECTION OF MARCH ROAD AND BURNT LANDS ROAD AND ONE PORTABLE TRAILER OWNED BY CAVANAGH LOCATED ON THE SOUTH SIDE OF MARCH ROAD JUST EAST OF THE SITE ON THE EXISTING WEST CARLETON QUARRY PROPERTY.

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 BURNT LANDS ROAD TO THE NORTH OF THE SITE AND ONE PORTABLE TRAILER OWNED BY CAVANAGH LOCATED ON THE SOUTHSIDE OF MARCH ROAD JUST EAST OF THE SITE ON THE EXISTING WEST CARLETON QUARRY PROPERTY.

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 THE SITE ARE LIMITED TO DITCHES ALONG ACCESS ROADS, AND MINOR PONDING IN DISTURBED AREAS AND LOW-LYING AREAS. WATER POOLS AND/OR FLOWS THROUGH THESE FEATURES DURING FRESHET, BUT BASED ON SITE OBSERVATIONS, THESE FEATURES TYPICALLY DRY UP WITH NO FLOW BY THE END OF APRIL OR EARLY MAY. BASED ON TOPOGRAPHY AND SITE OBSERVATIONS, WHEN PRESENT, DRAINAGE FROM THE SITE FLOWS TOWARDS THE EXISTING WEST CARLETON QUARRY AND IS HANDLED AS

WITHIN 120 METRES OF THE SITE, SHALLOW ROADSIDE DITCHES EXIST ALONG THE NORTH AND SOUTH SIDES OF MARCH ROAD.

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 NORTHERN HALF OF THE SITE AND THE SOUTHEAST PORTION OF THE SITE ARE TREE COVERED. THE OFF-SITE LANDS TO THE WEST AND NORTH OF THE SITE ARE TREE COVERED.

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 LICENSE BOUNDARY ADJACENT TO MARCH ROAD. THERE IS NO FENCING PRESENT ON THE EASTERN AND SOUTHERN BOUNDARIES OF THE SITE, WHICH ARE SHARED BOUNDARIES WITH THE EXISTING WEST CARLETON QUARRY, AND NO FENCING IS PRESENT ALONG THE WESTERN BOUNDARY OF THE SITE.

EXISTING FEATURES CROSS-SECTIONS

69 LOCATION OF CROSS-SECTIONS

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

70 HORIZONTAL AND VERTICAL SCALES

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

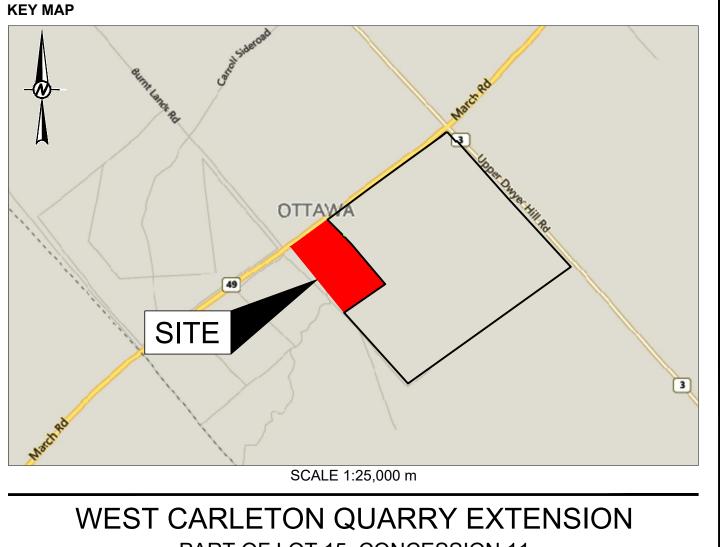
71 EXISTING FEATURES CROSS-SECTIONS

TWO EXISTING FEATURES CROSS-SECTIONS ARE PROVIDED ON THE EXISTING FEATURES PLAN (PAGE 2 OF 5).

72 MAXIMUM PREDICTED WATER TABLE

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

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).



PART OF LOT 15, CONCESSION 11 FORMER GEOGRAPHIC TOWNSHIP OF HUNTLEY, CITY OF OTTAWA

APPLICANT: THOMAS CAVANAGH CONSTRUCTION LIMITED 9094 CAVANAGH ROAD ASHTON, ONTARIO K0A 1B0

QUARRY LICENSE NO. 626555

- 1. LICENCED AREA, WEST CARELTON QUARRY EXTENSION 18.2 HECTARES.
- 2. AREA OF OPERATION, WEST CARELTON QUARRY EXTENSION 16.5 HECTARES.

3. THIS SITE PLAN IS PREPARED FOR SUBMISSION TO THE MINISTRY OF NATURAL

- RESOURCES AND FORESTRY IN CONJUNCTION WITH AN APPLICATION FOR A CLASS 'A' QUARRY BELOW WATER UNDER THE AGGREGATE RESOURCES ACT AND REGULATIONS. 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.

PARKS WATER WELL INFORMATION SYSTEM)

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

CON 12, LOT 15 CON 12, LOT 14 LOTS AND CONCESSION LINES



-×-X-X-X-X-X-X-PAGE WIRE FENCE/GATE

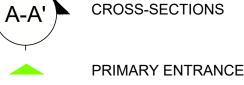
UTILITY POLE

- - - ROADSIDE DITCH

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

CONTOURS/INDEX CONTOURS

PRIMARY EXIT



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
- PRINTER 2016. 3. CITY OF OTTAWA 2012 TOPO LIDAR TILES.
- 4. MAPPING AND GROUND CONTROL FOR THE SITE PLAN COMES FROM LAND INFORMATION ONTARIO (LIO) DATA AVAILABLE FROM THE MINISTRY OF NATURAL RESOURCES AND FORESTRY, CITY OF OTTAWA 2012 TOPO LIDAR TILES AND A GROUND SURVEY CONDUCTED BY CAVANAGH IN NOVEMBER 2019.
- 5. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28.

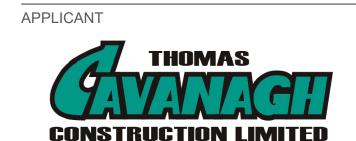
THOMAS CAVANAGH CONSTRUCTION LIMITED

WEST CARLETON QUARRY EXTENSION

PROJECT NO.

1899975

EXISTING FEATURES - SITE



PREPARED JPAO APPROVED KAM CONTROL REV. **FIGURE** 2 OF 5 0009

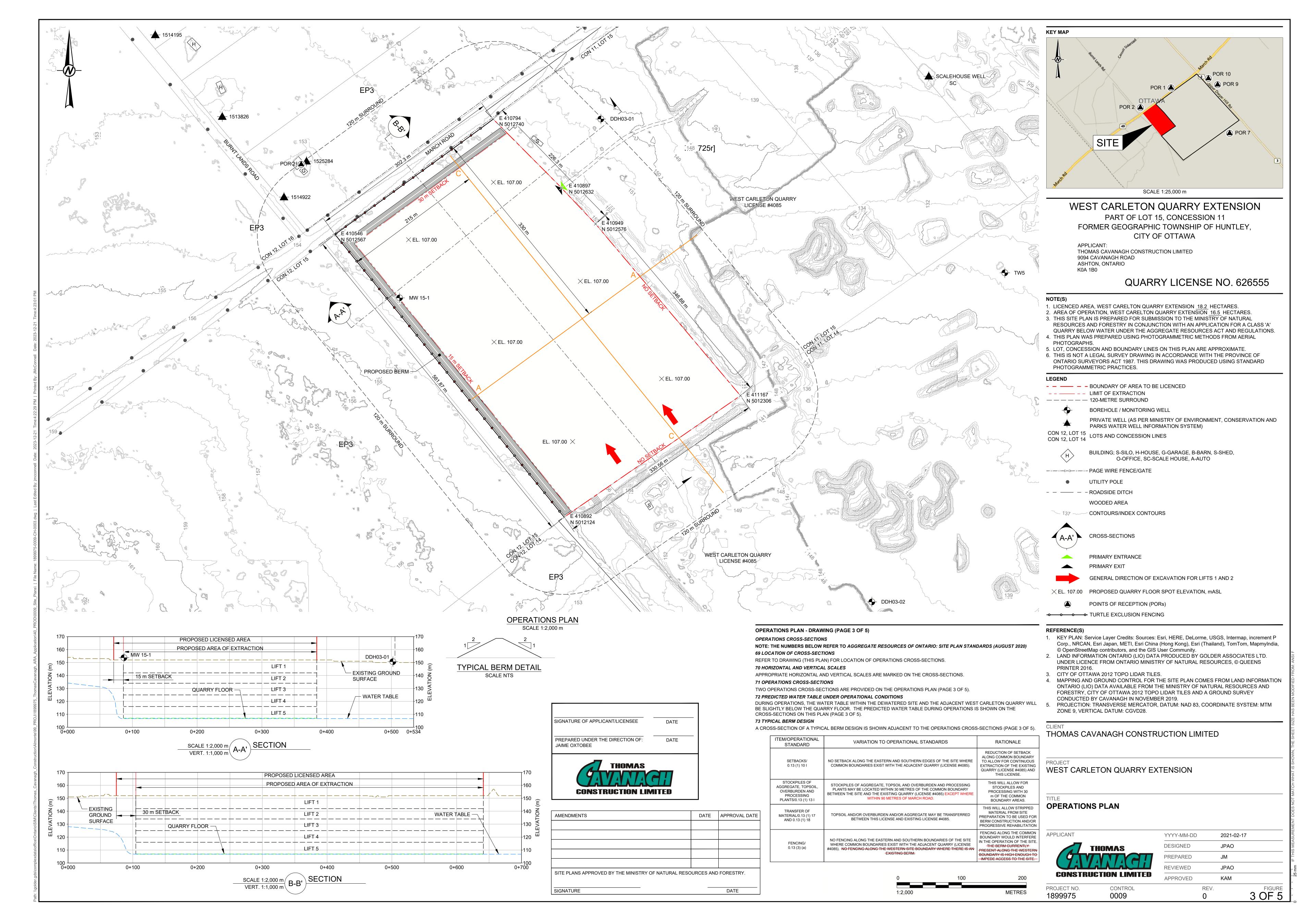
2021-02-17

YYYY-MM-DD

DESIGNED

SIGNATURE OF APPLICANT/LICENSEE DATE PREPARED UNDER THE DIRECTION OF: JAIME OXTOBEE **CONSTRUCTION LIMITED**

AMENDMENTS		DATE	APPROVAL D
SITE PLANS APPROVED BY TH	E MINISTRY OF NATURAL RESC	OURCES AND	FORESTRY.
SIGNATURE			DATE



OPERATIONS PLAN - NOTES (PAGE 4 OF 5)

NOTE: THE NUMBERS BELOW REFER TO AGGREGATE RESOURCES OF ONTARIO: SITE PLAN STANDARDS (AUGUST 2020) 33 PROPOSED ENTRANCE AND EXIT

ACCESS TO THE SITE FOR HAULAGE PURPOSES WILL BE FROM UPPER DWYER HILL ROAD AND MARCH ROAD THROUGH THE ENTRANCES/EXITS OF THE EXISTING WEST CARLETON QUARRY. THE CURRENT INTERNAL ENTRANCE/EXIT POINT FOR THE SITE IS SHOWN ON THIS PLAN. THIS ENTRANCE/EXIT POINT TO THE SITE MAY VARY ALONG THE COMMON BOUNDARIES BETWEEN THE SITE AND LICENSE #4085.

ACCESS TO THE SITE WILL BE CONTROLLED BY THE EXISTING GATES ERECTED AND MAINTAINED AT THE ENTRANCES/EXITS OF THE EXISTING

WEST CARLETON QUARRY. THESE GATES WILL BE KEPT CLOSED WHEN THE SITE IS NOT IN OPERATION.

34 AREA TO BE EXTRACTED

AREA OF EXTRACTION IS 16.5 HECTARES. THE BOUNDARY OF THE AREA OF EXTRACTION IS SHOWN ON THE OPERATIONS PLAN (PAGE 3 OF 5 THE SIGNIFICANT WOODLANDS AND WESTERN CHORUS FROG HABITAT WITHIN THE EXTRACTION AREA SHALL NOT BE REMOVED OR IMPACTE UNTIL THE 'INTEGRATED OPERATIONS & REHABILITATION AMENDMENT' TO THE EXISTING WEST CARLETON QUARRY (LICENSE #4085) IS APPROVED BY THE MNRF.

36 PROPOSED FENCING

THE EXISTING FENCING ON THE NORTH SIDE OF THE SITE ALONG MARCH ROAD WILL BE REPAIRED, AS NECESSARY. NO NEW FENCING IS PROPOSED FOR THE SITE. THE EASTERN AND SOUTHERN BOUNDARIES OF THE SITE ARE COMMON BOUNDARIES WITH THE EXISTING WEST CARLETON QUARRY AND NO FENCING IS PROPOSED ALONG THESE BOUNDARIES. THERE IS AN EXISTING BERM ALONG THE MAJORITY OF THE WESTERN PROPERTY BOUNDARY AND NO ADDITIONAL FENCING IS PROPOSED ALONG THIS BOUNDARY. PRIOR TO SITE OPERATIONS, TURTLE EXCLUSION FENCING SHALL BE INSTALLED ALONG THE WESTERN PROPERTY BOUNDARY WHICH SHALL ALSO BE REQUIRED TO MEET THE ARA REQUIREMENTS FOR A FENCE IN O. REG. 244/97. TURTLE EXCLUSION FENCING WILL ALSO BE ADDED ALONG THE NORTHERN BOUNDARY OF THE SITE ALONG MARCH ROAD.

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

A.NO BUILDINGS OR PERMANENT STRUCTURES ARE PROPOSED FOR THE SITE.

- B.NO SCRAP WILL BE STORED ON SITE. SCRAP FROM THE SITE WILL BE TEMPORARILY STORED WITHIN THE AREA DESIGNATED ON THE OPERATIONS SITE PLAN FOR THE EXISTING WEST CARLETON QUARRY.
- C.LOCATIONS OF THE AGGREGATE STOCKPILES WILL FOLLOW OPERATION AND THEREFORE VARY ON SITE. STOCKPILES WILL BE LOCATED NO CLOSER THAN 30 METRES TO THE LICENSED BOUNDARY EXCEPT WHERE THERE IS A COMMON BOUNDARY WITH THE EXISTING WEST CARLETON QUARRY. STOCKPILES WILL BE LOCATED NO CLOSER THAN 90 METRES OF RESIDENTIAL LAND USE/LAND ZONED FOR RESIDENTIAL PURPOSES (WITH THE EXCEPTION OF PROPERTY OWNED BY CAVANAGH).
- EXCESS TOPSOIL AND OVERBURDEN MATERIAL WILL BE STOCKPILE WITHIN THE LICENSED AREA AS IT BECOMES AVAILABLE. D.INTERNAL HAUL ROADS WITHIN THE EXISTING WEST CARLETON QUARRY WILL BE EXTENDED INTO THE SITE 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 BELOW GRADE WITHIN THE EXTRACTION AREA AND FOLLOW ADVANCEMENT OF THE QUARRY FACES.

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, AND WILL NOT BE LOCATED WITHIN 90 METRES OF

39 LOCATION OF ANY PROPOSED RECYCLABLE MATERIALS

AGGREGATE STOCKPILES MAY INCLUDE RECYCLABLE MATERIALS AND IMPORTED AGGREGATE MATERIALS REQUIRED FOR BLENDING PROCESSES. LOCATIONS OF THE RECYCLABLE MATERIALS STOCKPILES WILL FOLLOW OPERATION AND THEREFORE VARY ON SITE STOCKPILES WILL BE LOCATED NO CLOSER THAN 30 METRES TO THE LICENSED BOUNDARY EXCEPT WHERE THERE IS A COMMON BOUNDARY WITH THE EXISTING WEST CARLETON QUARRY. STOCKPILES WILL BE LOCATED NO CLOSER THAN 90 METRES OF RESIDENTIAL LAND

USE/LAND ZONED FOR RESIDENTIAL PURPOSES (WITH THE EXCEPTION OF PROPERTY OWNED BY CAVANAGH). REMOVAL OF RECYCLED AGGREGATE IS TO BE ONGOING.

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 AND 2 METRES VERTICALLY FROM ANY WATER SOURCE. ANY REBAR AND OTHER STRUCTURAL METAL REMOVED FROM THE MATERIAL DURING PROCESSING WILL BE STORED IN THE DESIGNATED SCRAP AREA (ON THE EXISTING WEST CARLETON QUARRY SITE) 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.

40 SEQUENCE/DIRECTION OF OPERATION

THE SITE WILL BE ACCESSED FROM THE EXISTING WEST CARLETON QUARRY LOCATED IMMEDIATELY TO THE EAST AND SOUTH. AS DESCRIBED IN THE ACOUSTIC ASSESSMENT REPORT, FOR LIFTS 1 AND 2, THE DIRECTION OF EXTRACTION SHALL BE FROM SOUTH TO NORTH. TOWARDS MARCH ROAD. FOR LIFTS 3, 4 AND 5 THE DIRECTION OF EXTRACTION SHALL BE FROM NORTH TO SOUTH, AWAY FROM MARCH ROAD. 41 STRIPPING AND STOCKPILING OF TOPSOIL/OVERBURDEN

TOPSOIL OR OVERBURDEN STRIPPED IN THE OPERATION OF THE SITE WILL STORED IN BERMS WITHIN THE SETBACK ALONG THE WESTERN AND NORTHERN BOUNDARIES 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.

42 EXTRACTION LIFTS

THE EXTRACTION WILL TAKE PLACE IN FIVE LIFTS, WITH THE BOTTOM LIFT REACHING A FINAL ELEVATION OF 107 M ASL AS INDICATED ON THE OPERATIONS PLAN (PAGE 3 OF 5). THE MAXIMUM LIFT HEIGHT WOULD BE NINE METRES. THE APPROXIMATE FLOOR ELEVATIONS OF LIFT 1, LIFT 2, LIFT 3, LIFT 4 AND LIFT 5 ARE 142 M ASL, 134 M ASL, 125 M ASL, 116 M ASL AND 107 M ASL, RESPECTIVELY.

EXTRACTION LIFTS AND BENCH HEIGHTS WILL BE IN COMPLIANCE WITH MINISTRY OF LABOUR REQUIREMENTS. THE QUARRY 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 INTO THE EXISTING WEST CARLETON QUARRY. DURING OPERATIONS THE WATER FROM THE SITE WILL CONTINUE TO DISCHARGE TO THE EXISTING WEST CARLETON QUARRY AND WILL BE HANDLED AS PART OF THE ONGOING WATER MANAGEMENT FOR THE EXISTING WEST CARLETON QUARRY. THE EXISTING WEST CARLETON QUARRY HAS A PERMIT TO TAKE WATER AND ENVIRONMENTAL COMPLIANCE APPROVAL UNDER THE ONTARIO WATER RESOURCES ACT AUTHORIZING THE TAKING AND DISCHARGE OF WATER ASSOCIATED WITH QUARRY OPERATIONS.

44 SOURCE WATER PROTECTION POLICIES

BASED ON GROUNDWATER MODELLING COMPLETED FOR THE MISSISSIPPI VALLEY SOURCE PROTECTION AREA ASSESSMENT REPORT (2011) WHPA-D (5- TO 25-YEAR TIME OF TRAVEL) FOR THE VILLAGE OF ALMONTE SUPPLY WELLS WAS MAPPED ON THE LANDS IMMEDIATELY TO THE WEST OF THE SITE AND ON THE SOUTHWESTERN MOST CORNER OF THE SITE. BECAUSE THE NEPEAN FORMATION IS THE PRIMARY SOURCE OF WATER FOR THE ALMONTE WELLS, THE WHPAS FOR THE ALMONTE WELLS ARE MAPPED WITHIN THE NEPEAN FORMATION.

THE PROPOSED EXTRACTION WITHIN THE EXTENSION LANDS WILL OCCUR WITHIN THE BOBCAYGEON AND GULL RIVER FORMATIONS. BENEATH, AND IMMEDIATELY TO THE WEST OF THE SITE THERE IS A SIGNIFICANT SEPARATION BETWEEN THE BOBCAYGEON AND GULL RIVER FORMATIONS AND THE DEEPER NEPEAN FORMATION (I.E., THE NEPEAN FORMATION IS AT A DEPTH OF GREATER THAN 80 METRES BENEATH THE BASE OF THE PROPOSED QUARRY WITHIN THE SITE). IN ADDITION, THERE WILL BE NO FUEL STORAGE WITHIN THE SITE. AS SUCH, IMPACTS TO THE GROUNDWATER QUALITY OR QUANTITY AT THE VILLAGE OF ALMONTE SUPPLY WELLS AS A RESULT OF THE PROPOSED DEVELOPMENT OF THE SITE IS NOT PREDICTED.

45 PROPOSED FUEL STORAGE AREAS

NO PERMANENT OR TEMPORARY FUEL STORAGE WILL OCCUR AT THE SITE.

46 LOCATION OF ALL EXCAVATION SETBACKS

EXCAVATION SETBACKS INCLUDE A 30-METRE SETBACK ON THE NORTH SIDE OF THE SITE ADJACENT TO MARCH ROAD AND A 15-METRE SETBACK ON THE WESTERN SIDE OF THE SITE. NO SETBACKS ARE PRESENT ON THE SHARED BOUNDARIES WITH THE EXISTING WEST CARLETON QUARRY ON THE EAST SIDE AND SOUTH SIDE OF THE SITE. THE EXCAVATION SETBACKS ARE AS SHOWN ON THE OPERATIONS

PLAN (PAGE 3 OF 5). 47 FINAL ELEVATION

THE FINAL FLOOR ELEVATION OF THE SITE IS APPROXIMATELY 107 M ASL AS INDICATED BY THE SPOT ELEVATIONS ON THE OPERATIONS PLAN

(PAGE 3 OF 5). 48 PROPOSED BERMS

STORAGE BERMS FOR TOPSOIL AND OVERBURDEN WILL BE LOCATED WITHIN THE SETBACK ALONG THE WESTERN AND NORTHERN BOUNDARIES OF THE SITE. THE BERMS ARE NOT REQUIRED FOR NOISE ATTENUATION. AND THE MINIMUM HEIGHT FOR THE STORAGE BERMS

IS 2 METRES. 49 BERM VEGETATION AND MAINTENANCE

EXISTING AND PROPOSED 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 ROCK MATERIAL AT THE SITE WILL BE EXTRACTED USING DRILLING AND BLASTING TECHNIQUES. THE EQUIPMENT TO BE LOCATED ON SITE WILL INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING: LOADERS, DUMP TRUCKS, WATER TRUCKS, TRACTORS, DRILLS, EXCAVATORS, COMPRESSORS, BULLDOZERS, HYDRAULIC DRILLS, BACKHOES, HAULAGE TRUCKS, SCRAPERS, MAINTENANCE/WELDING VEHICLES AND

CRUSHING/SCREENING PLANT THE PLANT WILL INCLUDE A CRUSHING OPERATION CONSISTING OF, BUT NOT LIMITED TO, THE FOLLOWING:

- PRIMARY CRUSHER WITH PRIMARY SCREEN
- SECONDARY CRUSHER WITH SECONDARY SCREEN
- ASSORTED CONVEYORS AND CRUSHERS

51 PROPOSED TREE SCREENS

NO ADDITIONAL TREE SCREENS ARE PROPOSED AT THIS TIME. NATURAL TREE SCREENS CURRENTLY EXIST ON THE NORTH AND WEST SIDES OF THE SITE, ADDITIONAL TREES AND SHRUBS SHALL BE PLANTED WHERE THERE ARE EXISTING BREAKS OR OPENINGS IN VEGETATION OR EXISTING TREE SCREENS ALONG THE WEST SIDE OF THE SITE ADJACENT TO BURNT LANDS PROVINCIAL PARK. THE PLANTING (I.E., SPECIES TO PLANT) WILL BE IN A MANNER CONSISTENT WITH THE REQUIREMENTS IN NOTE 63 OF THE REHABILITATION PLAN.

OPERATION PLAN - NOTES (PAGE 4 OF 5)

52 HOURS OF OPERATION

HOURS OF OPERATION SHALL BE DAILY FROM 7:00 TO 19:00 FOR EXTRACTION AND PROCESSING AND DAILY FROM 7:00 TO 23:00 FOR SHIPPING/DELIVERY. FURTHER DETAILS ARE PROVIDED WITHIN THE RECOMMENDATIONS OF THE ACOUSTIC ASSESSMENT REPORT (SEE RECOMMENDATIONS IN ACOUSTIC ASSESSMENT SECTION FOLLOWING SITE PLAN NOTE 58).

RESPONSES TO EMERGENCIES AND REQUIRED MAINTENANCE IS NOT LIMITED BY THE HOURS OF OPERATION LISTED IN THE ACOUSTIC ASSESSMENT REPORT.

53 TREES AND STUMPS

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 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 2,000,000. IF THE EXISTING WEST CARLETON QUARRY IS IN OPERATION, THE COMBINED ANNUAL TONNAGE LIMIT FOR THE TWO LICENSES WOULD BE 2,000,000 TONNES.

57 FREQUENCY AND TIMING OF BLASTS

BLASTING WILL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE BLASTING IMPACT ANALYSIS STUDY PREPARED BY EXPLOTECH (SEE RECOMMENDATIONS IN SECTION FOLLOWING SITE PLAN NOTE 58). ALL BLASTS WILL BE MONITORED FOR GROUND VIBRATIONS AND BLAST OVERPRESSURE AND WILL OPERATE TO ENSURE COMPLIANCE WITH CURRENT PROVINCIAL GUIDELINES. ALL BLAST MONITORING REPORTS WILL BE RETAINED BY THE LICENSEE AND MADE AVAILABLE UPON REQUEST BY THE MINISTRY OF NATURAL RESOURCES AND FORESTRY.

58 SENSITIVE RECEPTORS WITHIN 500 METRES

THERE ARE A TOTAL OF FIVE (5) SENSITIVE RECEPTORS WITHIN 500 METRES OF THE SITE BOUNDARY. THE TABLE BELOW PROVIDES THE DISTANCE FROM THE SITE BOUNDARY TO THE SENSITIVE RECEPTORS.

LOCATION OF RECEPTOR DISTANCE TO RECEPTOR (m) DIRECTION FROM	I EXTRACTION LIMIT
1616 BURNT LANDS ROAD 135 NORTHWEST	
1644 BURNT LANDS ROAD 305 NORTHWEST	
1654 BURNT LANDS ROAD 385 NORTHWEST	
1674 BURNT LANDS ROAD 480 NORTHWEST	
4061 MARCH ROAD 420 NORTH	

TECHNICAL REPORT RECOMMENDATIONS AND/OR MONITORING

HYDROGEOLOGY AND HYDROLOGY

- PRIOR TO THE START OF WATER TAKING FOR THE EXTENSION LANDS, THE PERMIT TO TAKE WATER FOR THE EXISTING WEST CARLETON QUARRY SHALL BE AMENDED TO INCLUDE THE WATER TAKING ASSOCIATED WITH PROPOSED QUARRY EXTENSION AND TO INCREASE THE FREQUENCY OF THE GROUNDWATER AND SURFACE WATER LEVEL MEASUREMENTS FOR LOCATIONS INCLUDED IN THE MONITORING PROGRAM TO MONTHLY.
- THE MONITORING PROGRAM FOR THE SITE SHALL BE COMPLETED IN ACCORDANCE WITH THE PERMIT TO TAKE WATER AND ENVIRONMENTAL COMPLIANCE APPROVAL.
- IN THE EVENT OF A WELL INTERFERENCE COMPLAINT, THE LICENSEE SHALL IMPLEMENT THE COMPLAINTS

RESPONSE PROGRAM OUTLINED IN THE HYDROGEOLOGICAL AND HYDROLOGICAL ASSESSMENTS REPORT.

- ESTABLISH A MINIMUM 30 M SETBACK TO MARCH ROAD AND 15 M ALONG THE WESTERN BOUNDARY OF THE SITE TO BE CLEARLY DEMARCATED AND RESPECTED. IT IS UNDERSTOOD THAT A BERM WILL NEED TO BE CREATED IN THIS AREA. EXISTING VEGETATION NORTH AND WEST OF THE BERM SHOULD BE RETAINED WHERE FEASIBLE. AND UNVEGETATED AREAS WHERE VEGETATION WAS REMOVED FOR BERM CREATION SHOULD BE REPLANTED. WHERE FEASIBLE.
- NO CLEARING OF VEGETATION WITHIN THE CORE BREEDING BIRD SEASON (APRIL 1 AUGUST 15) AND WITHIN THE TIMING WINDOWS FOR SAR BATS (APRIL 1ST - SEPTEMBER 30TH LITTLE BROWN MYOTIS, NORTHERN MYOTIS AND TRI-COLORED BAT; MARCH 151H - NOVEMBER 301H EASTERN SMALL-FOOTED MYOTIS. UNLESS A NESTING SURVEY HAS BEEN COMPLETED BY A QUALIFIED BIOLOGIST WITHIN 24 HOURS OF THE CLEARING, AND NO ACTIVE NESTS WERE OBSERVED.
- SURFACE WATER THAT CURRENTLY FLOWS FROM THE WEST, ACROSS THE WETLAND AND OTHER AREAS OF THE SITE, THROUGH THE EXISTING QUARRY, INTO THE PSW, SHOULD BE MAINTAINED.
- PREPARATION OF AN AWARENESS PACKAGE HIGHLIGHTING SAR THAT MAY BE PRESENT AT OR NEAR THE SITE. INCLUDING INFORMATION ON IDENTIFICATION, LEGAL PROTECTION, AND ENCOUNTER PROCEDURES TO BE FOLLOWED IN THE EVENT THAT A SAR OR ANY WILDLIFE IS ENCOUNTERED. THE AWARENESS PACKAGE IS TO BE AVAILABLE AT THE SITE, AND ALL STAFF SHOULD BE MADE AWARE OF THE CONTENT THROUGH SPECIFIC TRAINING.
- STANDARD BEST MANAGEMENT PRACTICES TO REDUCE DUST AND NOISE MITIGATION AT THE QUARRY, AS ARE CURRENTLY IMPLEMENTED IN THE ADJACENT OPERATION, WILL BE CONTINUED DURING OPERATION OF THE PROJECT.
- UNDERTAKE ANNUAL REHABILITATION MONITORING FOLLOWING THE START OF PROGRESSIVE REHABILITATION 8.7 PORTABLE CONSTRUCTION EQUIPMENT ACTIVITIES ON THE SITE. THE MONITORING WOULD DOCUMENT THE STATUS OF PROGRESSIVE REHABILITATION AND OUTLINE RECOMMENDATIONS, IF REQUIRED, TO ENSURE CONTROL OF INVASIVE SPECIES AND OVERALL SUCCESS OF REHABILITATION ACTIVITIES.
- AFTER THE INITIAL THREE YEARS OF THE MONITORING PROGRAM, AN ASSESSMENT OF WHETHER ADDITIONAL REMEDIAL ACTIONS AND/OR ADDITIONAL MONITORING ARE REQUIRED WILL BE UNDERTAKEN
- O A TARGET OF 60% COVER BY NATIVE SPECIES IN WETLAND AND UPLAND REHABILITATION AREAS AND 60% SURVIVAL OF WOODY PLANTINGS. CONSISTENTLY UNDERPERFORMING WOODY SPECIES WILL BE REPLACED WITH A SPECIES THAT IS PERFORMING WELL OR IS KNOWN TO PERFORM WELL UNDER SIMILAR CONDITIONS, WHILE MAINTAINING TARGET DIVERSITY. REPLACEMENT PLANTINGS TO OCCUR IN SPRING OR FALL. ANY AREAS OF MEADOW THAT HAVE NOT ESTABLISHED WILL BE OVERSEEDED IN FALL
- IMPLEMENT AN INVASIVE SPECIES CONTROL PLAN TO CONTROL AND ERADICATE THE INTRODUCTION OF INVASIVE SPECIES WITH SPECIFIC FOCUS ON LIMITING POTENTIAL IMPACTS ON THE BURNT LANDS THAT WOULD THREATEN THE ECOLOGICAL INTEGRITY OF THE BURNT LANDS PROVINCIAL PARK AND ANSI.
- PRIOR TO SITE OPERATIONS, TURTLE EXCLUSION FENCING SHALL BE INSTALLED ALONG THE WESTERN PROPERTY BOUNDARY WHICH SHALL ALSO BE REQUIRED TO MEET THE ARA REQUIREMENTS FOR A FENCE IN O. REG. 244/97. TURTLE EXCLUSION FENCING WILL ALSO BE ADDED ALONG THE NORTHERN BOUNDARY OF THE SITE ALONG MARCH ROAD.

ACOUSTIC ASSESSMENT:

NOISE MITIGATION DETAILED IN THIS SECTION APPLIES TO OPERATIONS IN THE EXTENSION AREA.

THE PREDICTED NOISE IMPACTS WITHIN THE ACOUSTIC ASSESSMENT REPORT ARE BASED ON THE IMPLEMENTATION OF THE FOLLOWING MITIGATION MEASURES.

ASSUMPTIONS:

- THESE MITIGATION MEASURES SHALL APPLY TO THE EXTRACTION OF THE EXTENSION AREA.
- FOR LIFTS 1 AND 2, THE DIRECTION OF EXTRACTION SHALL BE FROM SOUTH TO NORTH, TOWARDS MARCH ROAD. FOR LIFTS 3, 4 AND 5 THE DIRECTION OF EXTRACTION SHALL BE FROM NORTH TO SOUTH, AWAY FROM MARCH

8.1 NOISE BARRIERS AND BERMS

NOISE BARRIERS AND BERMS SHALL BE PROVIDED AS PER SECTIONS 8.2 AD 8.3 BELOW.

EARTH, GRAVEL OR AGGREGATE BERMS OR STOCKPILES;

- NOISE BARRIERS AND BERMS MUST BE SOLID, HAVING NO GAPS, AND MUST HAVE A SURFACE DENSITY OF NO LESS THAN 20 KG/M2. EXAMPLES OF SUITABLE BARRIERS OR BERMS ARE AS FOLLOW:
- LIFT FACE OR EXISTING TERRAIN;
- CONCRETE OR BRICK WALLS;
- COMMERCIAL NOISE BARRIERS:
- SHIPPING CONTAINERS OR BUILDINGS;
- 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;
- NOISE BARRIERS SHIELDING PORTABLE EQUIPMENT MAY BE PROGRESSIVELY ESTABLISHED TO PROVIDE SHIELDING FROM LOCATION OF OPERATION TO THE IDENTIFIED NOISE SENSITIVE POINT OF RECEPTION (POR). THE PORS ASSOCIATED WITH THE EXTENSION AREA (POR 1, POR 2, POR 7, POR 9 AND POR 10) ARE SHOWN ON THE KEY PLAN LOCATED IN THE UPPER RIGHT CORNER OF THE OPERATIONS PLAN.

8.2 ROCK DRILLING:

- THE OPERATION OF A STANDARD HYDRAULIC ROCK DRILL SHALL TAKE PLACE ONLY DURING THE DAYTIME PERIOD (07:00 - 19:00) AND SHALL COMPLY WITH THE FOLLOWING
- POINTS OF RECEPTION POR 1, POR 2, POR 9 AND POR 10 MUST BE SHIELDED FROM THE NOISE OF ROCK DRILLING BY A PORTABLE NOISE BARRIER WHEN ROCK DRILLING IS OCCURRING IN THE AREAS AND LIFTS DESCRIBED IN THE FOLLOWING TABLE.
- THE PORTABLE NOISE BARRIER SHALL BE A MINIMUM 6 M HIGH AND A MINIMUM OF 12 M LONG AND LOCATED NO MORE THAN 5 M FROM THE ROCK DRILL IN THE DIRECTION OF THE SHIELDED POINT OF RECEPTION.
- IN SOME LOCATIONS, MULTIPLE POINTS OF RECEPTION NEED SHIELDING, HENCE MULTIPLE PORTABLE BARRIERS MUST BE PROVIDED AT THESE LOCATIONS. LINES OF SIGHT TO POINTS OF RECEPTION IN THE TABLE BELOW SHALL BE FULLY SHIELDED FROM ROCK DRILLING.

OPERATION PLAN - NOTES (PAGE 4 OF 5)

	· ·			
	PORTABLE BARRIERS MUST SHIELD LINE OF SIGHT FROM THE ROCK DRILL TO THE POINT OF RECEPTION IN THE AREAS DESCRIBED (REFER TO OPERATIONS PLAN FOR LINE LOCATIONS)			
	EXTENSION AREA LIFT 1 (ROCK DRILL AT APPROX 150 MASL)		EXTENSION AREA LIFT 3 (ROCK DRILL AT APPROX 134 MASL)	EXTENSION AREA LIFTS 4 & 5 (ROCK DRILL BELOW APPROX 134 MASL)
POR 1	NORTH OF LINE AA	NORTH OF LINE AA	BARRIER REQUIRED	BARRIER NOT REQUIRED
OR 2	BARRIER REQUIRED	BARRIER REQUIRED	BARRIER REQUIRED	BARRIER NOT REQUIRED
POR 9	EAST OF LINE CC	BARRIER NOT REQUIRED	BARRIER NOT REQUIRED	BARRIER NOT REQUIRED
OR 10	EAST OF LINE CC	BARRIER NOT REQUIRED	BARRIER NOT REQUIRED	BARRIER NOT REQUIRED

8.3 PORTABLE CRUSHING AND SCREENING PLANT AND GENERATOR

IN THE FOLLOWING TABLE AND LINES SHOWN ON THE OPERATIONS PLAN.

FULLY SHIELDED FROM THE PORTABLE CRUSHING PLANT AND THE GENERATOR.

- THE OPERATION OF THE PORTABLE CRUSHING AND SCREENING PLANT AND ASSOCIATED DIESEL GENERATOR (CRUSHING PLANT) SHALL TAKE PLACE ONLY DURING THE DAYTIME PERIOD (07:00 TO 19:00) AND SHALL COMPLY WITH THE FOLLOWING:
- O THE CRUSHING PLANT SHALL BE LOCATED ON THE QUARRY FLOOR AT A MAXIMUM ELEVATION OF 142 MASL.
- THE CRUSHING PLANT SHALL BE LOCATED WITHIN 30 M OF THE ADVANCING LIFT FACE SUCH THAT THE LIFT FACE PROVIDES ACOUSTIC SHIELDING AS FOLLOWS:
- O SHIELDING FOR POR 1 AND POR 2 WHEN THE LIFT FACE IS ADVANCING TO THE NORTH, AS IN LIFTS 1 AND 2.
- O SHIELDING FOR POR 7 WHEN THE LIFT FACE IS ADVANCING SOUTH AS IN LIFTS 3, 4 AND 5 WITHIN THE EXTENSION AREA. • POR 9 AND POR 10 SHALL BE SHIELDED FROM PORTABLE CRUSHING PLANT BY A BARRIER. BERM OR STOCKPILE WHEN REQUIRED AS DETAILED
- O THE NOISE BARRIER, BERM OR STOCKPILE SHALL BE A MINIMUM 6 M HIGH AND A MINIMUM OF 30 M LONG AND LOCATED NO MORE THAN 30 M FROM THE PLANT IN THE DIRECTION OF POR 9 AND POR 10. LINES OF SIGHT TO POINTS OF RECEPTION POR 9 AND POR 10 MUST BE

POINT OF RECEPTION EXTENSION	A BARRIER, BERM OR STOCKPILE MUST SHIELD LINE OF SIGHT FROM THE CRUSHING PLANT AND GENERATOR TO POR 9 AND POR 10 IN THE AREAS DESCRIBED (REFER TO OPERATIONS PLAN FOR LINE LOCATIONS)			
	EXTENSION AREA LIFT 1 (PLANT AT APPROX 142		EXTENSION AREA LIFT 3 (PLANT AT APPROX 125 MASL)	EXTENSION AREA LIFTS 4 & 5 (PLANT AT/OR BELOW APPROX 115 MASL)
POR 9	EAST OF LINE CC	BARRIER NOT REQUIRED	BARRIER NOT REQUIRED	BARRIER NOT REQUIRED
POR 10	EAST OF LINE CC	BARRIER NOT REQUIRED	BARRIER NOT REQUIRED	BARRIER NOT REQUIRED

- THE GENERATOR EXHAUST SHALL BE FITTED WITH AN EXHAUST SILENCER WITH MINIMUM INSERTION LOSS GIVEN IN TABLE 9. (THE GENERATOR IS CURRENTLY FITTED WITH AN EXHAUST SILENCER WHICH MEETS THIS REQUIREMENT.)
- THE GENERATOR TRAILER REAR OPENING AND SIDE VENTS SHALL BE FITTED WITH ACOUSTIC LOUVRES THAT MEET THE MINIMUM INSERTION LOSS REQUIREMENTS LISTED IN THE ACOUSTIC ASSESSMENT REPORT. THE LOUVRES SHALL BE CONSTRUCTED OF WEATHER RESISTANT MATERIAL AND FULLY SEAL ALL OPENINGS IN THE GENERATOR TRAILER.

8.4 LOADERS

- DURING THE DAYTIME PERIOD (07:00 TO 19:00): A MAXIMUM OF TWO LOADERS SHALL BE IN OPERATION CARRYING OUT EXTRACTION, STOCKPILING AND LOADING OPERATIONS.
- DURING THE EVENING PERIOD (19:00 TO 23:00): A MAXIMUM OF ONE LOADER SHALL BE IN OPERATION CARRYING OUT STOCKPILING AND LOADING OPERATIONS, EXTRACTION OPERATIONS SHALL NOT OCCUR DURING THE EVENING (19:00 TO 23:00) AND NIGHTTIME (23:00 TO 07:00) PERIODS.

8.5 HIGHWAY TRUCKS

- THE LOADING AND SHIPPING OF PRODUCT USING HIGHWAY TRUCKS SHALL TAKE PLACE ONLY DURING THE DAYTIME (07:00 TO 19:00) AND EVENING (19:00 TO 23:00) PERIODS AND SHALL COMPLY WITH THE FOLLOWING:
- O WHEN OPERATING ON-SITE, HIGHWAY TRUCKS SHALL NOT EXCEED 20 KM/H AND SHALL NOT USE COMPRESSION BRAKING (JAKE

8.6 QUARRY TRUCKS (ROCK TRUCKS)

- THE DELIVERY OF AGGREGATE FINES FROM THE CRUSHING AND SCREENING PLANT AREA TO THE WASH PLANT ON THE ORIGINAL WEST CARLETON QUARRY USING QUARRY TRUCKS SHALL TAKE PLACE ONLY DURING THE DAYTIME PERIOD (07:00 TO 19:00) AND SHALL COMPLY WITH THE FOLLOWING:
- O WHEN OPERATING ON-SITE, HIGHWAY TRUCKS SHALL NOT EXCEED 20 KM/H AND SHALL NOT USE COMPRESSION BRAKING (JAKE

 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).

8.8 NEW PROCESS AND ALTERNATIVE EXTRACTION PROCEDURES

• IF A NEW PROCESS OR ALTERNATIVE EXTRACTION PROCEDURE NOT DESCRIBED IN THIS REPORT IS INTRODUCED TO THE SITE, THEN THIS PROCESS OR ALTERNATIVE PROCEDURE SHALL BE ASSESSED BY A QUALIFIED ACOUSTICAL CONSULTANT PRIOR TO IMPLEMENTATION. NOISE MITIGATION MEASURES SHALL BE REVIEWED, AND ALTERED IF NECESSARY, TO ENSURE THAT MECP SOUND LEVEL LIMITS ARE MET AT ALL POINTS OF RECEPTION.

BLASTING IMPACT ANALYSIS:

STANDARD.

IT IS RECOMMENDED THAT THE FOLLOWING CONDITIONS BE APPLIED FOR ALL BLASTING OPERATIONS AT THE PROPOSED WEST CARLETON

- QUARRY EXTENSION AREA. 1. ALL BLASTS SHALL BE MONITORED FOR BOTH GROUND VIBRATION AND OVERPRESSURE AT THE CLOSEST PRIVATELY OWNED SENSITIVE RECEPTORS ADJACENT THE SITE, OR CLOSER, WITH A MINIMUM OF TWO (2) INSTRUMENTS - ONE INSTALLED IN FRONT OF THE BLAST AND ONE
- 2. IN ORDER TO SAFEGUARD THE STRUCTURAL INTEGRITY OF NON-SENSITIVE RECEPTORS, WE RECOMMEND THAT VIBRATIONS AT THESE PROPERTIES BE MAINTAINED BELOW 50MM/S (>40HZ) IN ACCORDANCE WITH RESEARCH PERFORMED BY THE UNITED STATES BUREAU OF MINES (USBM RI8507).
- 3. THE GUIDELINE LIMITS FOR VIBRATION AND OVERPRESSURE SHALL ADHERE TO STANDARDS AS OUTLINED IN THE MECP MODEL MUNICIPAL NOISE CONTROL BY-LAW PUBLICATION NPC 119 (1978) OR ANY SUCH DOCUMENT, REGULATION OR GUIDELINE WHICH SUPERSEDES THIS
- 4. IN THE EVENT OF AN EXCEEDANCE OF NPC 119 LIMITS OR ANY SUCH DOCUMENT, REGULATION OR GUIDELINE WHICH SUPERSEDES THIS STANDARD, BLAST DESIGNS AND PROTOCOL SHALL BE REVIEWED PRIOR TO ANY SUBSEQUENT BLASTS AND REVISED ACCORDINGLY IN ORDER TO RETURN THE OPERATIONS TO COMPLIANT LEVELS.
- OVERPRESSURE PROPAGATION WILL BE AWAY FROM STRUCTURES AS MUCH AS POSSIBLE. 6. BLAST DESIGNS SHALL BE CONTINUALLY REVIEWED WITH RESPECT TO FRAGMENTATION, GROUND VIBRATION AND OVERPRESSURE. BLAST DESIGNS SHALL BE MODIFIED AS REQUIRED TO ENSURE COMPLIANCE WITH CURRENT APPLICABLE GUIDELINES AND REGULATIONS.

7. BLASTING PROCEDURES SUCH AS DRILLING, AND LOADING SHALL BE REVIEWED ON A YEARLY BASIS AND MODIFIED AS REQUIRED TO ENSURE

5. ORIENTATION OF THE AGGREGATE EXTRACTION OPERATION WILL BE DESIGNED AND MAINTAINED SO THAT THE DIRECTION OF THE

COMPLIANCE WITH INDUSTRY STANDARDS. 8. DETAILED BLAST RECORDS SHALL BE MAINTAINED IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICES.

KEY MAP POR 9 POR 7 SCALE 1:25,000 m

WEST CARLETON QUARRY EXTENSION

PART OF LOT 15. CONCESSION 11 FORMER GEOGRAPHIC TOWNSHIP OF HUNTLEY. CITY OF OTTAWA

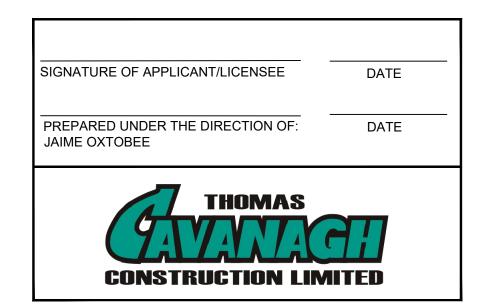
APPLICANT: THOMAS CAVANAGH CONSTRUCTION LIMITED 9094 CAVANAGH ROAD ASHTON, ONTARIO

QUARRY LICENSE NO. 626555

PHOTOGRAPHS.

K0A 1B0

- LICENCED AREA, WEST CARELTON QUARRY EXTENSION 18.2 HECTARES.
- AREA OF OPERATION, WEST CARELTON QUARRY EXTENSION 16.5 HECTARES. 3. THIS SITE PLAN IS PREPARED FOR SUBMISSION TO THE MINISTRY OF NATURAL RESOURCES AND FORESTRY IN CONJUNCTION WITH AN APPLICATION FOR A CLASS 'A'
- QUARRY BELOW WATER UNDER THE AGGREGATE RESOURCES ACT AND REGULATIONS. 4. THIS PLAN WAS PREPARED USING PHOTOGRAMMETRIC METHODS FROM AERIAL
- 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.



AMENDMENTS	DATE	APPROVAL DATE
SITE PLANS APPROVED BY THE MINISTRY OF NATU	RAL RESOURCES AN	ID FORESTRY.
SIGNATURE		DATE

PROJECT NO.

1899975

THOMAS CAVANAGH CONSTRUCTION LIMITED

WEST CARLETON QUARRY EXTENSION

OPERATIONS PLAN NOTES



CONTROL

0009

PREPARED JM REVIEWED JPAO KAM APPROVED REV. FIGURE 4 OF 5

2021-03-25

