A KEY MAP SHOWING THE LOCATION OF THE SITE IS LOCATED IN THE TOP RIGHT CORNER OF ALL DRAWINGS.

GENERAL DESCRIPTION OF THE SITE:

PART OF LOT 2 CONCESSION 4

GEOGRAPHIC TOWNSHIP OF CORNWALL COUNTY OF SOUTH STORMONT

THE SCALE OF THE PLAN VIEW IS 1:2000 (METRIC). A GRAPHICAL REPRESENTATION OF THE SCALE IS SHOWN ON THE RIGHT SIDE OF ALL DRAWINGS

THE APPLICANT'S NAME AND ADDRESS IS: CORNWALL GRAVEL COMPANY LIMITED

390 ELEVENTH STREET WEST CORNWALL, ONTARIO, K6H 5R9

THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENCE, CATEGORY 2 QUARRY ALL EXISTING BUILDINGS LOCATED ON OR WITHIN 120M OF THE SITE ARE SHOWN ON THE PLAN. THERE ARE NO EXISTING BUILDINGS ON SITE. BELOW WATER UNDER THE AGGREGATE RESOURCES OF ONTARIO PROVINCIAL STANDARDS, VERSION 1.0.

ALL OF THE DRAWINGS HAVE BEEN SIGNED AND SEALED BY MR MARK PRIDDLE, P.GEO. (APPROVED UNDER SUBSECTION 8(4) OF THE AGGREGATE RESOURCES ACT) WHO DESIGNED AND REVIEWED THE PLANS BASED ON THE TECHNICAL STUDIES PREPARED IN SUPPORT OF THIS QUARRY AND BASED ON THE PROVINCIAL STANDARDS OF THE AGGREGATES RESOURCES ACT OF ONTARIO. IN ADDITION, ALL OF THE DRAWINGS HAVE BEEN SIGNED UP BY 1.1.18 INTERNAL HAUL ROADS THE APPLICANT, DAVID GRANT, PRESIDENT OF CORNWALL GRAVEL COMPANY LIMITED.

THE NORTH ARROW IS LOCATED IN THE TOP RIGHT CORNER OF ALL DRAWINGS.

A SECTION FOR RECORDING SITE PLAN AMENDMENTS, INCLUDING APPROVAL DATES, HAS BEEN PROVIDED AND CAN BE FOUND ON THE RIGHT SIDE OF ALL

1.1.20EXISTING SURFACE WATER AND DRAINAGE FACILITIES

3. LIDAR IMAGING PROVIDED BY RME GEOMATICS, AUGUST 2016.

THE TOPOGRAPHY OF THE SITE IS ILLUSTRATED ON THE PLAN AT 2M CONTOUR INTERVALS, EXPRESSED AS METRES ABOVE MEAN SEA LEVEL (ASL).

1.1.17 LOCATION OF EXISTING ENTRANCES AND EXITS FROM THE SITE THE SITE DOES NOT CURRENTLY HAVE DIRECT ACCESS TO MUNICIPAL ROADS. THERE IS AN EMERGENCY ENTRANCE/EXIT LOCATED ON THE NORTH WEST CORNER OF THE PROPERTY. ALL ENTRANCES AND EXITS EXISTING ON THE SITE ARE CURRENTLY CLOSED TO THE PUBLIC.

EXISTING HAUL ROADS ARE SHOWN ON THIS PLAN.

THE GROUNDWATER TABLE HAS BEEN ESTABLISHED ON-SITE. ACCORDING TO THE HYDROGEOLOGICAL REPORT ON-SITE, THE AVERAGE LONG-TERM GROUNDWATER ELEVATION IS ESTIMATED AT APPROXIMATELY 58m ASL.

ALL EXISTING SURFACE WATER DRAINAGE FACILITIES AND DIRECTIONS ARE SHOWN ON THE PLAN.

1.1.22 EXISTING TREE COVER EXISTING TREE COVER IS SHOWN ON THE PLAN.

1.1.23 EXISTING STOCKPILES OF TOPSOIL AND OVERBURDEN THERE ARE NO EXISTING STOCKPILES OF TOPSOIL OR OVERBURDEN ON SITE

1.1.24 EXISTING AGGREGATE STOCKPILES/RECYCLABLE MATERIAL THERE ARE NO EXISTING STOCKPILES OF AGGREGATE OR RECYCLABLE MATERIALS ON SITE.

1.1.25 EXISTING SCRAP LOCATIONS THERE IS NO EXISTING SCRAP STORAGE ON SITE.

1.1.26 EXISTING FUEL STORAGE AREA

1.1.27 SIGNIFICANT NATURAL FEATURES ON AND WITHIN 120 M OF THE SITE UNEVALUATED WOODLAND EXISTS TO THE EAST OF THE MACLEOD V SITE.

1.1.28 SIGNIFICANT MAN-MADE FEATURES ON AND WITHIN 120 M OF THE SITE MAN-MADE FEATURES ON AND WITHIN 120M OF THE SITE INCLUDE: RESIDENTIAL DWELLINGS, SHEDS, ROADS, DITCHES, AND POWER/COMMUNICATION LINES. THE EXISTING MACLEOD QUARRY (ARA 5942)IS LOCATED WEST OF THE SITE. ALL SIGNIFICANT MAN-MADE FEATURES ON AND WITHIN 120M OF THE SITE ARE SHOWN ON THE PLAN.

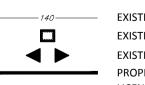
1.1.29 EXCAVATION FACES AND REHABILITATED AREA THIS IS A NEWLY PROPOSED DEVELOPMENT, AND THEREFORE THERE ARE NO EXISTING EXCAVATION FACES OR REHABILITATED AREAS ON SITE.

1.1.30 EXISTING PROCESSING AREAS THERE IS NO EXISTING PROCESSING AREA ON SITE.

AN EXISTING ±9.0M HIGH NOISE BARRIER BERM HAS BEEN CONSTRUCTED ALONG THE NORTH AND EAST SIDES OF THE PROPERTY AS PART OF THE MACLEOD QUARRY OPERATIONS.

CROSS-SECTIONS FOR EXISTING CONDITIONS ARE PROVIDED ON PAGE 2 OF THESE PLANS (CROSS-SECTIONS A-A' B-B' AND C-C')

LEGEND



EXISTING GROUND SURFACE CONTOUR (m asl) EXISTING BUILDING EXISTING SITE ENTRANCE / EXIT

LICENCE BOUNDARY

120m LICENCE OFFSET EXISTING ZONING BOUNDARY MUNICIPAL ROAD (ASPHALT) EXISTING GRAVEL

EXISTING TREE LINE

NEW BERM/ACOUSTIC BARRIER

115 Walgreen Road R.R. #3, Carp, ON KOA 1LO

Tel: 613-836-2184 Fax: 613-836-3742

PETER GRANT, VICE PRESIDENT

I HAVE THE AUTHORITY TO BIND THE CORPORATION

MARK PRIDDLE, P.GEO.

AREA(ha)

40.5

40.5

NORTHING EASTING ELEVATION

I HEREBY CERTIFY THAT THIS SITE PLAN WAS PRODUCED

DISTANCES SHOWN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048. ALL ELEVATIONS ON THIS PLAN ARE GEODETIC.

DESCRIPTION

Amendment

LICENCE AREA EXTRACTION AREA

UNDER MY SUPERVISION.

CORNWALL GRAVEL COMPANY LIMITED

MACLEOD 5 CATEGORY 1 CLASS "A" PIT BELOW WATER CATEGORY 2 CLASS "A" QUARRY BELOW WATER

EXISTING FEATURES PLAN

Drawn By: Project Number: CP-16-0280 Checked By: Paper Size: Drawing Number: 1:2000 (metric) Sheet 1 of 8 Date: AUG. 17, 2017

2. REFERENCE PLANS 52R-5986

THE LEGEND IS LOCATED ON THE RIGHT SIDE OF ALL DRAWINGS.

THE AREA TO BE LICENSED IS ±40.50 HECTARES, DIMENSIONED AS SHOWN ON THE PLAN.

DEMARCATION OF THE LOT AND CONCESSION LINES ARE SHOWN ON THE PLAN.

EXISTING ZONING OF THE SUBJECT PROPERTY AND ADJACENT PROPERTIES WITHIN 120M IS SHOWN ON THE PLAN, AND IS BASED ON THE TOWNSHIP OF SOUTH THERE IS NO EXISTING FUEL STORAGE ON SITE. STORMONT ZONING BY-LAW NO. 2011-100, AS AMENDED BY 2015-050.

1.1.16 LOCATION AND USE OF BUILDINGS AND STRICTURES ONSITE AND WITHIN 120 M OF THE SITE

1.1.32 LOCATION OF CROSS-SECTIONS

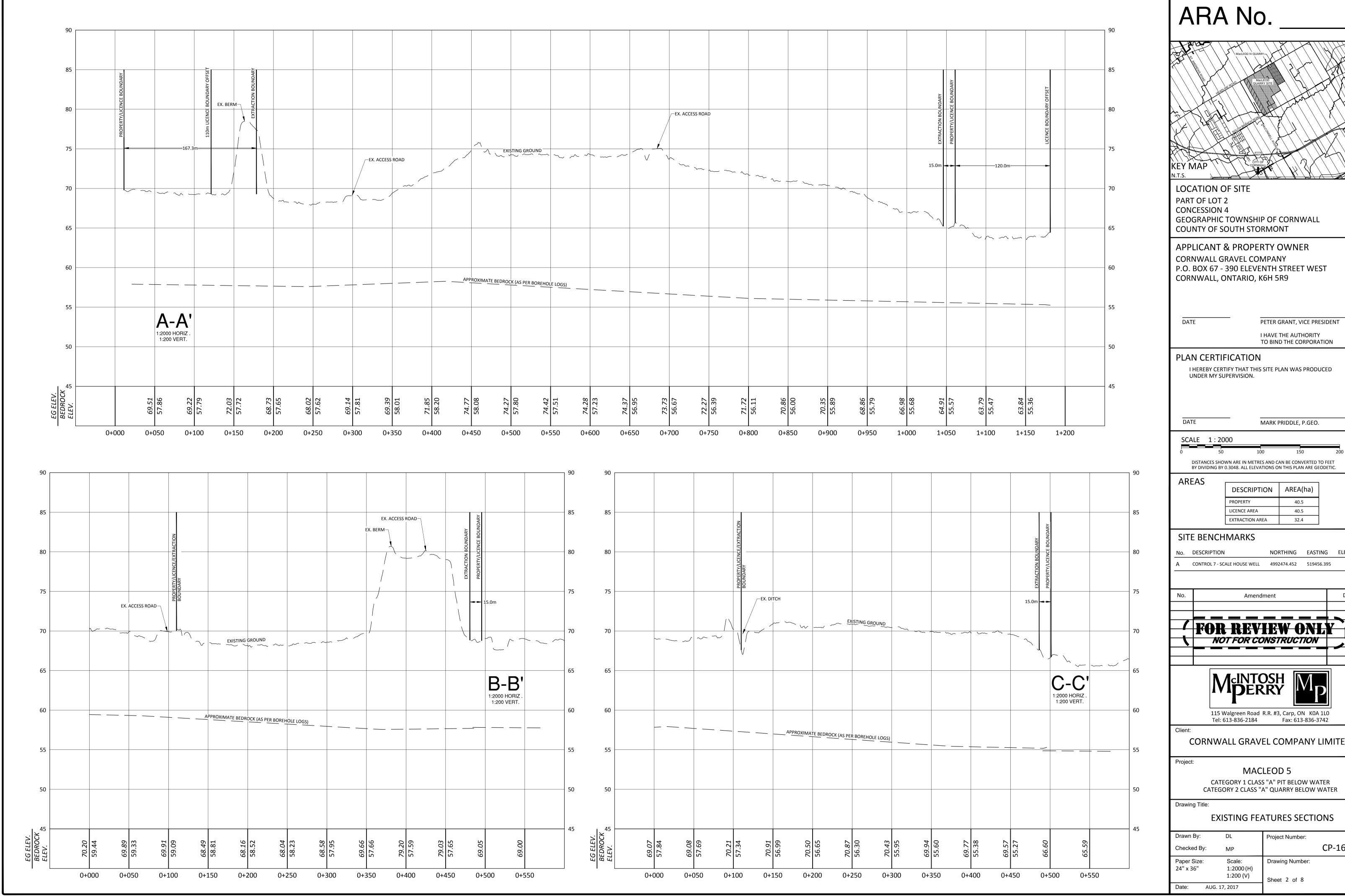
—— ⊳ —— EXISTING DITCH LINE

APPROXIMATE TEST WELL LOCATION EXISTING OFFSITE LEGAL EXISTING SURFACE DRAINAGE DIRECTION

EXISTING WETLAND

(OVERBURDEN STORAGE)

. . .



NORTHING EASTING ELEVATION A CONTROL 7 - SCALE HOUSE WELL 4992474.452 519456.395

Date NOT FOR CONSTRUCTION



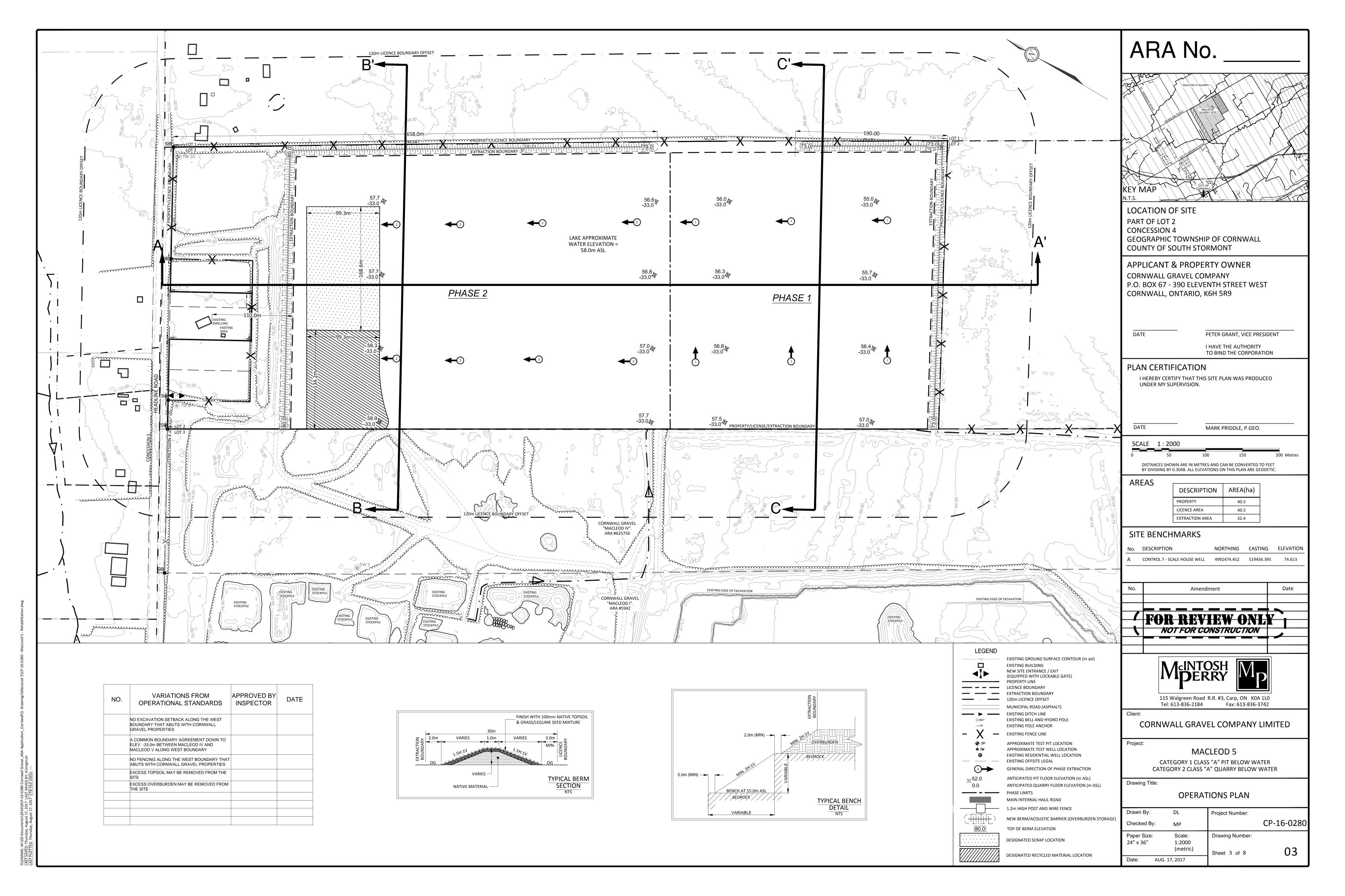
Fax: 613-836-3742

CORNWALL GRAVEL COMPANY LIMITED

CATEGORY 1 CLASS "A" PIT BELOW WATER

EXISTING FEATURES SECTIONS

CP-16-0280



1.2.1 SEQUENCE AND DIRECTION OF THE PROPOSED QUARRY DEVELOPMENT

THE OPERATION OF THIS QUARRY WILL OCCUR IN TWO (2) NUMBERED PHASES (PHASE 1 AND PHASE 2) AS THEY APPEAR ON THIS PLAN AND IN THE DIRECTION INDICATED BY ARROWS

PHASE ONE WILL CONSIST OF THE MIDDLE SECTION OF THE SITE AND WILL BE OPERATED IN A EASTERLY DIRECTION STARTING FROM THE SHARED BOUNDARY WITH THE MACLEOD IV QUARRY. PHASE 2 WILL CONSIST OF THE NORTH SECTION OF THE SITE AND WILL BE OPERATED IN A NORTHERLY DIRECTION STARTING AT THE PHASE BOUNDARY. MULTIPLE PHASES MAY BE OPERATED SIMULTANEOUSLY.

TOPSOIL AND OVERBURDEN MATERIAL WILL BE STRIPPED PROGRESSIVELY IN THE OPERATION OF THE SITE AND USED TO CONSTRUCT THE PERIMETER BERMS. TOPSOIL AND OVERBURDEN MATERIALS MAY ALSO BE TEMPORARILY STOCKPILED THROUGHOUT THE LICENSED AREA AS REQUIRED. TOPSOIL AND/OR OVERBURDEN STORED ONSITE WILL BE USED

IT IS ANTICIPATED THAT APPROXIMATELY 4,700 CUBIC METRES OF TOPSOIL WILL BE REQUIRED TO REHABILITATE THE FINAL SIDE SLOPES TO A SLOPE OF 2(H):1(V) TO THE 55M CONTOUR. APPROXIMATELY 32,000 CUBIC METRES OF TOPSOIL IS CURRENTLY ONSITE.

IT IS ANTICIPATED THAT APPROXIMATELY 49,000 CUBIC METRES OF OVERBURDEN WILL BE REQUIRED TO REHABILITATE THE FINAL SIDE SLOPES TO A SLOPE OF 2(H):1(V) TO THE 55M CONTOUR. APPROXIMATELY 4.850,000 CUBIC METRES OF OVERBURDEN IS CURRENTLY ONSITE TOPSOIL AND OVERBURDEN IN EXCESS OF REHABILITATION REQUIREMENTS MAY BE EXPORTED AS NEEDED. THE REMOVAL OF EXCESS TOPSOIL/OVERBURDEN FROM SITE SHALL BE APPROVED BY THE MNRF UNDER A VARIATION FROM OPERATIONAL STANDARDS AS SHOWN AT THE BOTTOM OF THE OPERATIONS PAGE. SEE NOTE 1.2.25.

1.2.3 EXTRACTION LIFTS

BENCHES SHALL BE CONSTRUCTED AT 55.0M ASL, 30.0M ASL, 5.0M ASL, -20.0M ASL AND -33.0 M ASL LOCATED AS SHOWN ON THE PLAN ABOVE. MULTIPLE LIFTS MAY OPERATE CONCURRENTLY. BENCH HEIGHT MAY VARY, HOWEVER EXTRACTION LIFTS AND BENCH HEIGHTS SHALL BE IN ACCORDANCE WITH ONTARIO MINISTRY OF LABOUR (MOL) REQUIREMENTS.

1.2.4 INTERNAL HAUL ROADS THE LOCATION OF THE INTERNAL HAUL ROADS WILL VARY AS THE QUARRY IS DEVELOPED. GENERALLY AGGREGATE HAULAGE WILL BE DIRECTED TO MACLEOD I FOR PROCESSING.

SOME SECONDARY AND TEMPORARY ROADS WILL BE CREATED AND REMOVED WITH THE EVOLUTION OF THE MACLEOD V QUARRY. DUST WILL BE MITIGATED ON SITE (SEE NOTE

1.2.5 PROPOSED ENTRANCE AND EXIT THE MAIN ACCESS TO THE QUARRY WILL BE FROM THE EXISTING MACLEOD I QUARRY. THE PROPOSED OPERATIONAL ENTRANCE/EXIT SHALL ENTER THE SITE AT THE WEST PROPERTY BOUNDARY FROM THE MACLEOD IV PROPERTY AND WILL NOT BE ACCESSIBLE TO THE PUBLIC. THE LOCATION OF THE ENTRANCE TO THE SITE WILL VARY AS THE QUARRY IS DEVELOPED. THERE IS ALSO AN EMERGENCY EXIT AT THE NORTH WEST CORNER OF THE MACLEOD V LICENSE BOUNDARY AS SHOWN ON THE OPERATIONS PLAN.

1.2.6 GROUNDWATER TABLE AND DEPTH OF EXTRACTION THE GROUNDWATER TABLE HAS BEEN ESTABLISHED ON-SITE. ACCORDING TO THE HYDROGEOLOGICAL REPORT ON-SITE, THE AVERAGE LONG-TERM GROUNDWATER ELEVATION IS

ESTIMATED AT APPROXIMATELY 58M ASL.

THE QUARRY AS NEEDED PROVIDED THAT ALL REQUIRED PROVINCIAL PERMITS IN PLACE.

UPGRADED TO 1.2M POST AND WIRE FENCE AS REQUIRED. ALL FENCING SHALL BE INSTALLED / REBUILT PRIOR TO ANY EXTRACTION OPERATIONS. WHERE THE EXTRACTION BOUNDARY

1.2.9 PROPOSED BUILDINGS AND STRUCTURES

ENDANGERED SPECIES ACT. MOBILE SITE TRAILERS WILL BE ALLOWED FOR THE STORAGE OF EQUIPMENT.

NO TEMPORARY STOCKPILES OF TOPSOIL OR OVERBURDEN WILL BE LOCATED WITHIN 30 METRES FROM THE LICENSED BOUNDARY OF THE SITE. TOPSOIL AND OVERBURDEN NEEDED FOR REHABILITATION THAT IS STRIPPED DURING THE OPERATION OF THE SITE WILL BE STORED SEPARATELY IN BERMS AND/OR STOCKPILES EXCESS. TOPSOIL/OVERBURDEN MAY BE USED OFF SITE AS REQUIRED BY THE OPERATOR (I.E. SOLD AS FILL). ADEQUATE VEGETATION WILL BE ESTABLISHED TO CONTROL EROSION OF ANY BERM OR STOCKPILE OF TOPSOIL OR OVERBURDEN. BERMS ARE TO BE BUILT WITHIN EXCAVATION SETBACKS AS SHOWN ON THE PLAN.

1.2.11 LOCATION OF ANY PROPOSED AGGREGATE STOCKPILE AREA(S), INCLUDING ANY RECYCLABLE MATERIALS ON THE SITE

IT IS ANTICIPATED THAT AGGREGATES FROM MACLEOD V WILL BE TAKEN FROM MUCK PILES AND TRANSPORTED FOR PROCESSING AT THE MACLEOD I STATIONARY CRUSHER. ALTERNATIVELY, A MOBILE CRUSHING/SCREENING OPERATION MAY BE IMPLEMENTED IN WHICH CASE STOCKPILES WILL REMAIN WITHIN THE FOOTPRINT OF MACLEOD V UNTIL THEY

1.2.23 TREES AND STUMPS ARE READY FOR TRANSPORT DIRECTLY OFFSITE. THE LOCATION OF THESE STOCKPILES WILL BE DETERMINED BY THE PHASING OF OPERATIONS AT THE TIME OF THEIR CONSTRUCTION.

PRIOR TO SITE PREPARATION AND KEPT ON-SITE DURING OPERATIONS. FUEL STORAGE AREA SHALL NOT BE LOCATED WITHIN 30M OF ANY WATER BODY.

1.2.14 AREA TO BE EXTRACTED

1.2.15 LOCATION OF ALL EXCAVATION SETBACKS

THE AREA TO BE EXTRACTED IS ±34.5 HECTARES.

THE LOCATION OF THE EXCAVATION SETBACKS ARE SHOWN AND LABELED ON THE PLAN. THERE WILL BE A 15 M SETBACK ON THE SOUTHERN AND EASTERN PROPERTY BOUNDARY AS

SHOWN ON THE OPERATIONAL PLAN. ON THE NORTHERN BOUNDARY THERE WILL BE A 110 M SETBACK. THERE WILL BE NO SETBACK ON THE WESTERN PROPERTY BOUNDARY WITH MACLEOD IV. A COMMON BOUNDARY AGREEMENT WILL BE FORMED BETWEEN MACLEOD IV AND V OVER THE ENTIRE MINING DEPTH ALONG THE WESTERN BOUNDARY. THIS SHALL BE APPROVED BY THE MINISTRY OF NATURAL RESOURCES AND FORESTRY UNDER A VARIATION OF OPERATIONAL STANDARDS.

THE FINAL ELEVATION OF THE QUARRY EXTRACTION SHALL BE - 33.0M ASL OR HIGHER. FINAL QUARRY FLOOR ELEVATIONS ARE SHOWN ON THE PLAN AS SPOT ELEVATIONS.

1.2.17 PROPOSED PROCESSING AREAS

PRIMARY AGGREGATE CRUSHING OPERATIONS WILL TAKE PLACE AT MACLEOD 1. PORTABLE PROCESSING PLANTS (CRUSHING SCREENING, WASHING) MAY BE UTILIZED ON SITE AS REQUIRED BY THE OPERATOR.

THERE WILL BE NO PROCESSING WITHIN 30 METRES OF THE BOUNDARY OF THE SITE. DUST WILL BE MITIGATED ON SITE AND WILL BE IN COMPLIANCE WITH M.O.E.C.C. REQUIREMENTS. WATER OR ANOTHER PROVINCIALLY APPROVED DUST SUPPRESSANT WILL BE APPLIED TO PROCESSING AREAS AS OFTEN AS REQUIRED TO MITIGATE DUST

BERMS SHALL BE CONSTRUCTED USING ON-SITE NATIVE OVERBURDEN MATERIAL, FINISHED WITH MINIMUM 100MM OF NATIVE TOPSOIL. BERMS TO BE CONSTRUCTED TO THE

AN EXISTING BERM IS LOCATED ALONG THE NORTH WEST EXTRACTION LIMIT AND SHALL BE MAINTAINED AT A MINIMUM HEIGHT OF 9.0M. THIS BERM IS A CONTINUATION OF THE EXISTING BERM FOLLOWING THE NORTH WESTERN EXTRACTION LIMIT OF MACLEOD IV. THIS BERM SHALL BE MAINTAINED AS NECESSARY DURING SITE PREPARATIONS SO AS TO PROVIDE ACOUSTICAL SHIELDING FOR NEIGHBOURING RESIDENTS, AND SHALL REMAIN FOR THE PROJECT LIFETIME.

1.2.19 BERM VEGETATION AND MAINTENANCE

EARTH BERMS WILL BE VEGETATED WITH NATIVE VEGETATION AND SLOPES SHALL BE SEEDED TO ENSURE ADEQUATE VEGETATION IS ESTABLISHED AND MAINTAINED.

THE EXTRACTION, PROCESSING AND SHIPMENT EQUIPMENT OPERATING IN THE PIT AND QUARRY MAY INCLUDE, BUT IS NOT LIMITED TO LOADERS, ROCK DRILLS, EXCAVATORS, BULLDOZERS, BACKHOES, SCRAPERS, PORTABLE PROCESSING EQUIPMENTS INCLUDING CRUSHING, SCREENING WASHING AND CONVEYING EQUIPMENT. HAUL TRUCKS, WATER TRUCKS AND SERVICE TRUCKS FOR GENERAL OPERATIONS AND MAINTENANCE. DUST WILL BE MITIGATED ON SITE.

THE MACLEOD V QUARRY WILL OPERATE ON A 24 HOUR BASIS AND 7 DAYS PER WEEK. HOWEVER, LIMITATIONS ON EQUIPMENT USES IN RELATION TO THE TIME OF DAY ARE PROVIDED

1.2.21PROPOSED TREE SCREENS

NO NEW TREE SCREENS ARE PROPOSED FOR THE SITE. A 15 M WIDE NATURALIZED AREA WILL BE LEFT ALONG HEADLINE ROAD WHERE OPERATIONS PERMIT.

CLEARING AND GRUBBING WILL BE UNDERTAKEN WHERE REQUIRED. ANY MERCHANTABLE WOOD WILL BE HARVESTED AND SOLD. STUMPS, BRANCHES AND OTHER WOODY MATERIA

2. A COMMON BOUNDARY AGREEMENT DOWN TO ELEV. -33.0m BETWEEN MACLEOD IV AND MACLEOD V ALONG WEST BOUNDARY; 3. EXCESS TOPSOIL CAN BE REMOVED FROM SITE;

4. EXCESS OVERBURDEN CAN BE REMOVED FROM SITE.

5. NO FENCING ALONG THE WEST BOUNDARY THAT ABUTS WITH CORNWALL GRAVEL PROPERTIES

1.2.26 FREQUENCY AND TIMING OF BLASTS

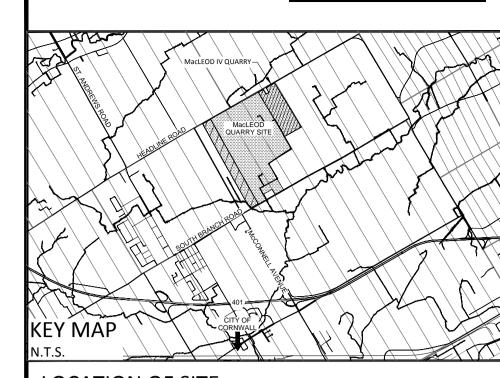
THE FREQUENCY OF BLASTING WILL BE DICTATED BY THE OPERATORS NEEDS. BLASTING WILL BE PERFORMED IN ACCORDANCE WITH THE MOECC REGULATIONS AND GUIDELINES IN REGARDS TO NOISE AND VIBRATION. THE BLASTING CONTRACTOR WILL MONITOR THE NOISE AND VIBRATION (AIR AND GROUND) LEVELS AT ALL TIMES DURING BLASTING. PROPER RECORD KEEPING SHALL BE CONDUCTED AND MADE AVAILABLE FOR REVIEW BY MNRF UPON REQUEST. IN ACCORDANCE WITH OPERATIONAL STANDARDS, NO BLASTING WILL OCCUR AT THIS SITE ON A HOLIDAY OR BETWEEN 6 PM AND 8 AM ON THE FOLLOWING DAY. PLEASE REFER TO RECOMMENDATIONS PROVIDED AS PART OF THE BLASTING IMPACT ANALYSIS PREPARED IN SUPPORT OF THIS APPLICATION; NOTE 1.2.28.

1.2.27 MAXIMUM ANNUAL TONNAGE THE MAXIMUM AMOUNT OF AGGREGATE TO BE REMOVED FROM THE SITE IN ANY CALENDAR YEAR IS NOT TO EXCEED 3,400,000 TONNES.

> VARIATIONS FROM APPROVED BY DATE Project: INSPECTOR OPERATIONAL STANDARDS MACLEOD 5 NO EXCAVATION SETBACK ALONG THE WEST CATEGORY 1 CLASS "A" PIT BELOW WATER BOUNDARY THAT ABUTS WITH CORNWALL GRAVEL PROPERTIES A COMMON BOUNDARY AGREEMENT DOWN TO Drawing Title: ELEV. -33.0m BETWEEN MACLEOD IV AND MACLEOD V ALONG WEST BOUNDARY NO FENCING ALONG THE WEST BOUNDARY THAT ABUTS WITH CORNWALL GRAVEL PROPERTIES Drawn By: DL **Project Number:** EXCESS TOPSOIL MAY BE REMOVED FROM THE Checked By: EXCESS OVERBURDEN MAY BE REMOVED FROM THE SITE Paper Size: Scale: Drawing Number: 24" x 36" 1:2000

> > Date:

ARA No.



LOCATION OF SITE PART OF LOT 2 **CONCESSION 4** GEOGRAPHIC TOWNSHIP OF CORNWALL COUNTY OF SOUTH STORMONT

CORNWALL, ONTARIO, K6H 5R9

APPLICANT & PROPERTY OWNER CORNWALL GRAVEL COMPANY P.O. BOX 67 - 390 ELEVENTH STREET WEST

PETER GRANT, VICE PRESIDENT I HAVE THE AUTHORITY TO BIND THE CORPORATION

PLAN CERTIFICATION

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

MARK PRIDDLE, P.GEO.

SCALE 1:2000

DISTANCES SHOWN ARE IN METRES AND CAN BE CONVERTED TO FEET

BY DIVIDING BY 0.3048. ALL ELEVATIONS ON THIS PLAN ARE GEODETIC AREAS

DESCRIPTION	AREA(ha)
PROPERTY	40.5
LICENCE AREA	40 E

32.4

EXTRACTION AREA

SITE BENCHMARKS

No. DESCRIPTION NORTHING EASTING ELEVATION A CONTROL 7 - SCALE HOUSE WELL 4992474.452 519456.395

Date Amendment

115 Walgreen Road R.R. #3, Carp, ON KOA 1LO

Tel: 613-836-2184 Fax: 613-836-3742

CORNWALL GRAVEL COMPANY LIMITED

CATEGORY 2 CLASS "A" QUARRY BELOW WATER

OPERATIONS SECTIONS (1)

CP-16-0280

(metric) Sheet 4 of 8

AUG. 17, 2017

NO WATER DIVERSION OR POINTS OF DISCHARGE TO SURFACE WATER ARE ANTICIPATED DURING PIT OPERATIONS. ANY WATER THAT ENTERS THE QUARRY MAY BE DISCHARGED FROM

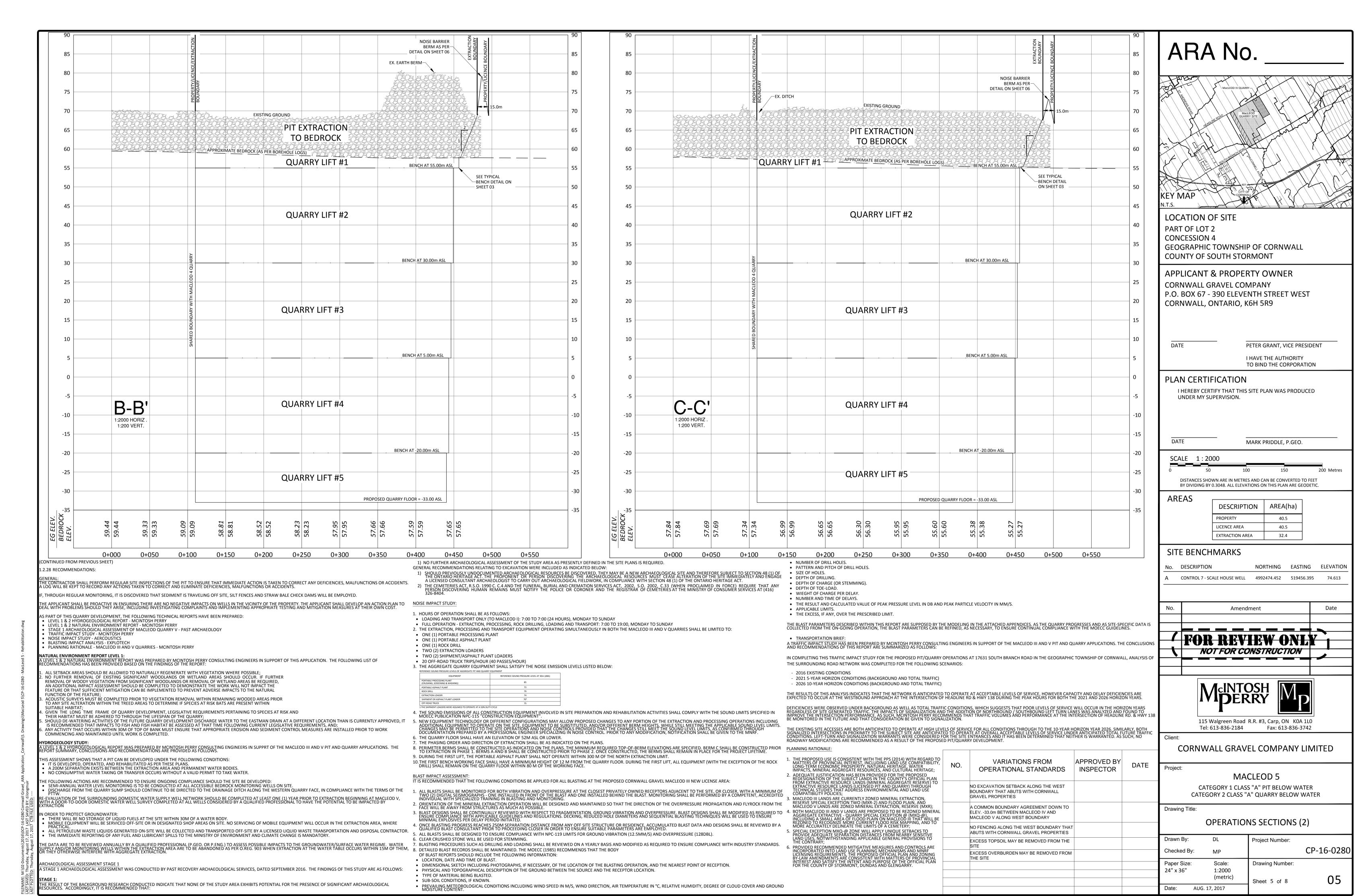
EXISTING FENCING ALONG THE PROPERTY BOUNDARIES SHALL REMAIN. IF EXISTING FENCING SURROUNDING THE SITE IS IN DISREPAIR, IT SHALL BE REBUILT WITH SIMILAR TYPE OR

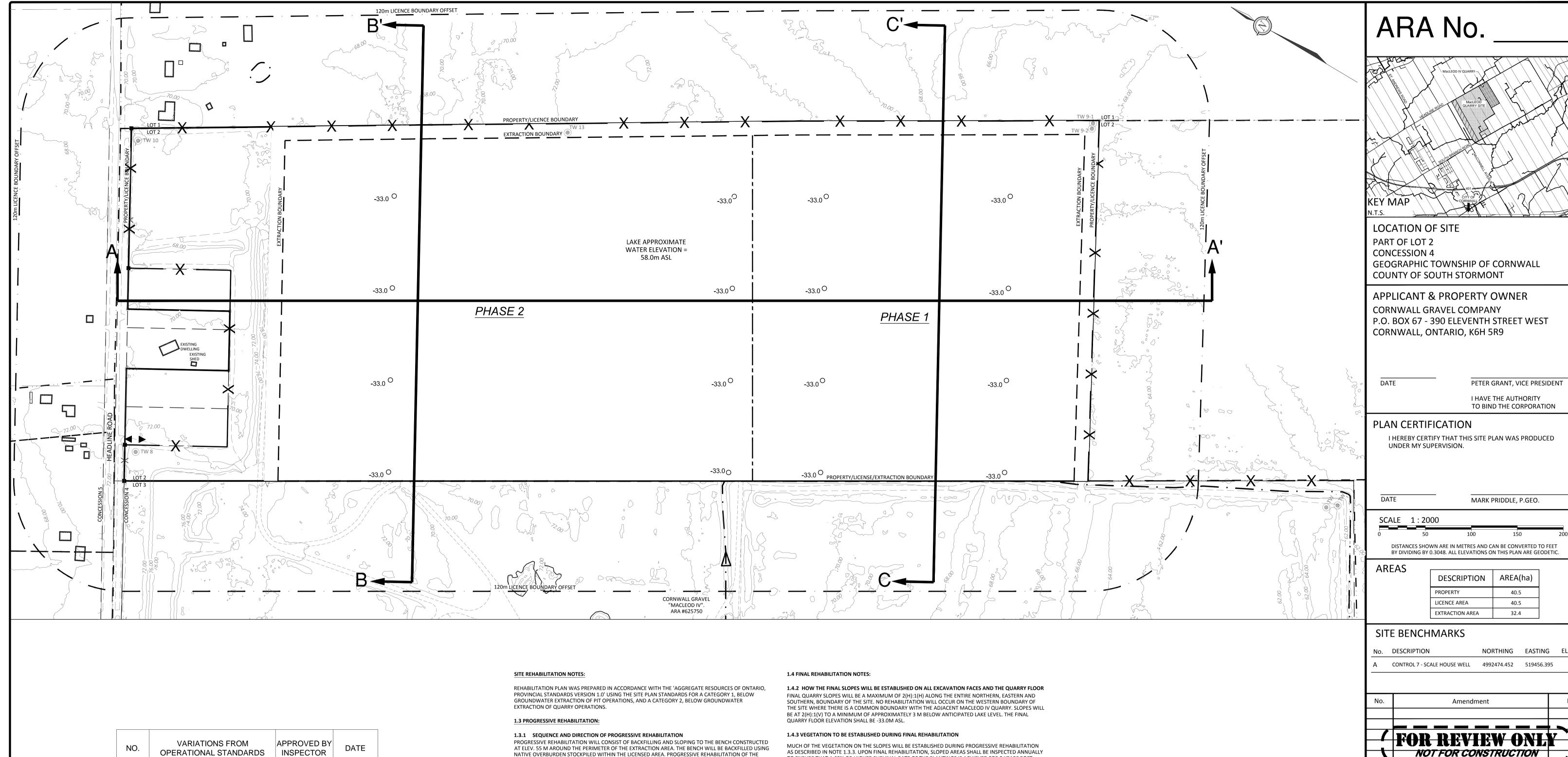
IS NOT CLEARLY DELINEATED BY FENCING, THE OPERATOR SHALL INSTALL STEEL POST MARKERS SPACED A MAXIMUM OF 30M APART ALONG THE EXTRACTION BOUNDARY PROVIDED THAT THEY DO NOT INTERFERE WITH FARMING OPERATIONS.

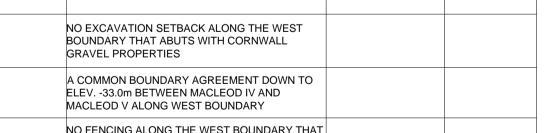
NO BUILDING ARE PLANNED AT THIS TIME HOWEVER BUILDINGS MAY BE ADDED BY THE OPERATOR AS NEEDED PROVIDED THEY ARE PERMITTED BY THE ZONING BYLAW AND THE

1.2.10 LOCATION OF ANY PROPOSED STOCKPILES OF TOPSOIL/OVERBURDEN

AS PART OF THE NOISE STUDY RECOMMENDATIONS. PLEASE REFER TO NOTE 1.2.28.







NO FENCING ALONG THE WEST BOUNDARY THAT ABUTS WITH CORNWALL GRAVEL PROPERTIES EXCESS TOPSOIL MAY BE REMOVED FROM THE EXCESS OVERBURDEN MAY BE REMOVED FROM

NATIVE OVERBURDEN STOCKPILED WITHIN THE LICENSED AREA. PROGRESSIVE REHABILITATION OF THE FIRST LIFT WILL START DURING THE MINING OF THE SECOND LIFT AND WILL BE IN A NORTH TO SOUTH DIRECTION FOLLOWING THE PROGRESSION OF THE MINING.

1.3.2 USE OF OVERBURDEN IN PROGRESSIVE REHABILITATION

AS PART OF THE OPERATIONAL PLANS, SUFFICIENT AMOUNT OF NATIVE OVERBURDEN AND NATIVE TOPSOIL WILL HAVE BEEN STORED IN STOCKPILES/BERMS IN ORDER TO REHABILITATE THE SITE (REFER TO NOTE 1.2.2). SIDE SLOPES WILL BE CREATED USING NATIVE OVERBURDEN FROM THE SITE TO PROVIDE A MAXIMUM SLOPE OF 2(H):1(V) TO 55 M ASL. A MINIMUM OF 100MM OF NATIVE TOPSOIL SHALL COVER THE OVERBURDEN ON THE GRADED SIDE SLOPES.

1.3.3 VEGETATION TO BE ESTABLISHED DURING PROGRESSIVE REHABILITATION DURING PROGRESSIVE REHABILITATION, SLOPES WILL BE SEEDED USING A LEGUME PASTURE FIELD MIX TO

AID WITH THE IMMEDIATE VEGETATION PROCESS. SEED SHALL BE APPLIED AS RECOMMENDED BY THE SUPPLIER. AFTERWARDS THE SLOPES SHALL BE LEFT TO REGENERATE NATURALLY WITH LOCAL VEGETATION SPECIES. VEGETATED SLOPES WILL BE MONITORED TO ENSURE SLOPE EROSION IS MINIMIZED.

1.3.4 QUARRY SLOPING

DURING QUARRY EXTRACTION AGGREGATE MAY BE EXCAVATED IN VERTICAL LIFTS AS NOTED ON THE QUARRY OPERATIONS PLAN. REHABILITATION OF THE QUARRY WILL INCLUDE THE IN-FILLING OF THE VERTICAL SECTIONS WITH NATIVE MATERIAL TO ACHIEVE A MAXIMUM SLOPE OF 2(H):1(V).

1.3.5 PROGRESSIVE REHABILITATION IN RELATION TO THE OPERATION SEQUENCE THE PERIMETER OF THE EXTRACTION AREA WILL BE PROGRESSIVELY REHABILITATED ONCE THE AREA HAS BEEN DEPLETED OF MARKETABLE AGGREGATE MATERIALS AND ENOUGH AREA IS AVAILABLE TO ENSURE THAT REHABILITATION ACTIVITIES WILL NOT INTERFERE WITH THE OPERATION.

1.3.6 AND 1.4.1 PROPOSED IMPORTATION OF MATERIAL TO FACILITATE REHABILITATION NO IMPORTATION OF TOPSOIL FOR REHABILITATION PURPOSES IS ANTICIPATED.

AS DESCRIBED IN NOTE 1.3.3. UPON FINAL REHABILITATION, SLOPED AREAS SHALL BE INSPECTED ANNUALLY TO ENSURE THAT A 60% OR HIGHER SURVIVAL RATE OF THE PLANTINGS IS ACHIEVED FOR 5 YEARS POST REHABILITATION. IF OBJECTIVES ARE NOT ACHIEVED, THEN PLANTINGS SHALL BE SUPPLEMENTED TO ACHIEVE THE 60% SURVIVAL RATE.

1.4.5 ANTICIPATED ELEVATION FINAL LAKE LEVEL

1.4.6 INTERNAL HAUL ROADS TO REMAIN

REMAIN AT THE DISCRETION OF THE OWNER.

AT THE COMPLETION OF EXTRACTION THE SITE WILL BE A LAKE WITH AN ANTICIPATED FINAL WATER ELEVATION OF \pm 58M ASL. THERE WILL BE A MINOR IMPACT ON THE OVERALL SURFACE WATER DRAINAGE AROUND THE SITE. SURFACE FLOWS TO THE NORTH AND WEST PORTION OF THE SITE WILL BE REDUCED

1.4.8 FINAL ELEVATIONS OF THE REHABILITATED SITE

THE FINAL ELEVATIONS OF THE REHABILITATED SITE IS ILLUSTRATED ON THE PLAN BY A 1M CONTOUR

1.4.9 LOCATION OF CROSS-SECTIONS OF REHABILITATED PLAN

1.4.4 BUILDINGS/STRUCTURES TO REMAIN ONSITE

UPON FINAL REHABILITATION THE USE OF ANY BUILDINGS ON SITE SHALL BE DETERMINED BY THE OWNER.

THE ANTICIPATED FINAL ELEVATION OF THE GROUNDWATER TABLE ON SITE IS $\pm\,58\text{M}$ ASL AS SHOWN ON THE CROSS-SECTIONS.

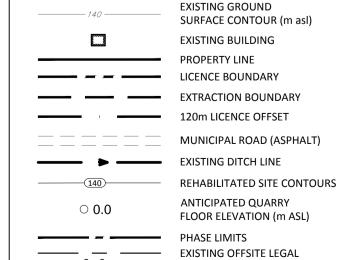
NO INTERNAL HAUL ROADS WILL REMAIN ON SITE AFTER EXTRACTION IS COMPLETED. ACCESS ROADS MAY

1.4.7 FINAL SURFACE WATER DRAINAGE

SLIGHTLY WITH WATER REMAINING ON SITE CONTAINED IN THE LAKE.

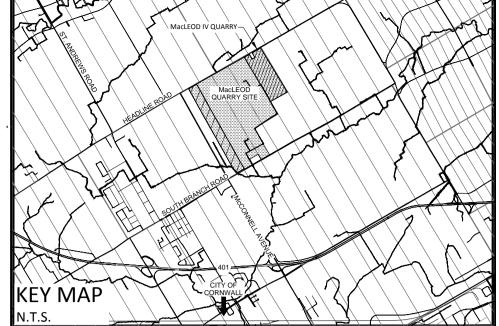
INTERVAL EXPRESSED AS METRES ABOVE SEA LEVEL (ASL).

THE LOCATION OF THE THREE (3) CROSS-SECTIONS ARE SHOWN ON THE PLAN.



1.2m HIGH POST AND WIRE FENCE

LEGEND



GEOGRAPHIC TOWNSHIP OF CORNWALL

P.O. BOX 67 - 390 ELEVENTH STREET WEST

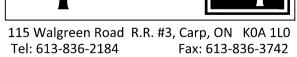
DISTANCES SHOWN ARE IN METRES AND CAN BE CONVERTED TO FEET

1.5	DESCRIPTION	AREA(ha)
	PROPERTY	40.5
	LICENCE AREA	40.5

E BENCHMARKS			
DESCRIPTION	NORTHING	EASTING	ELEVATION

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
А	CONTROL 7 - SCALE HOUSE WELL	4992474.452	519456.395	74.613





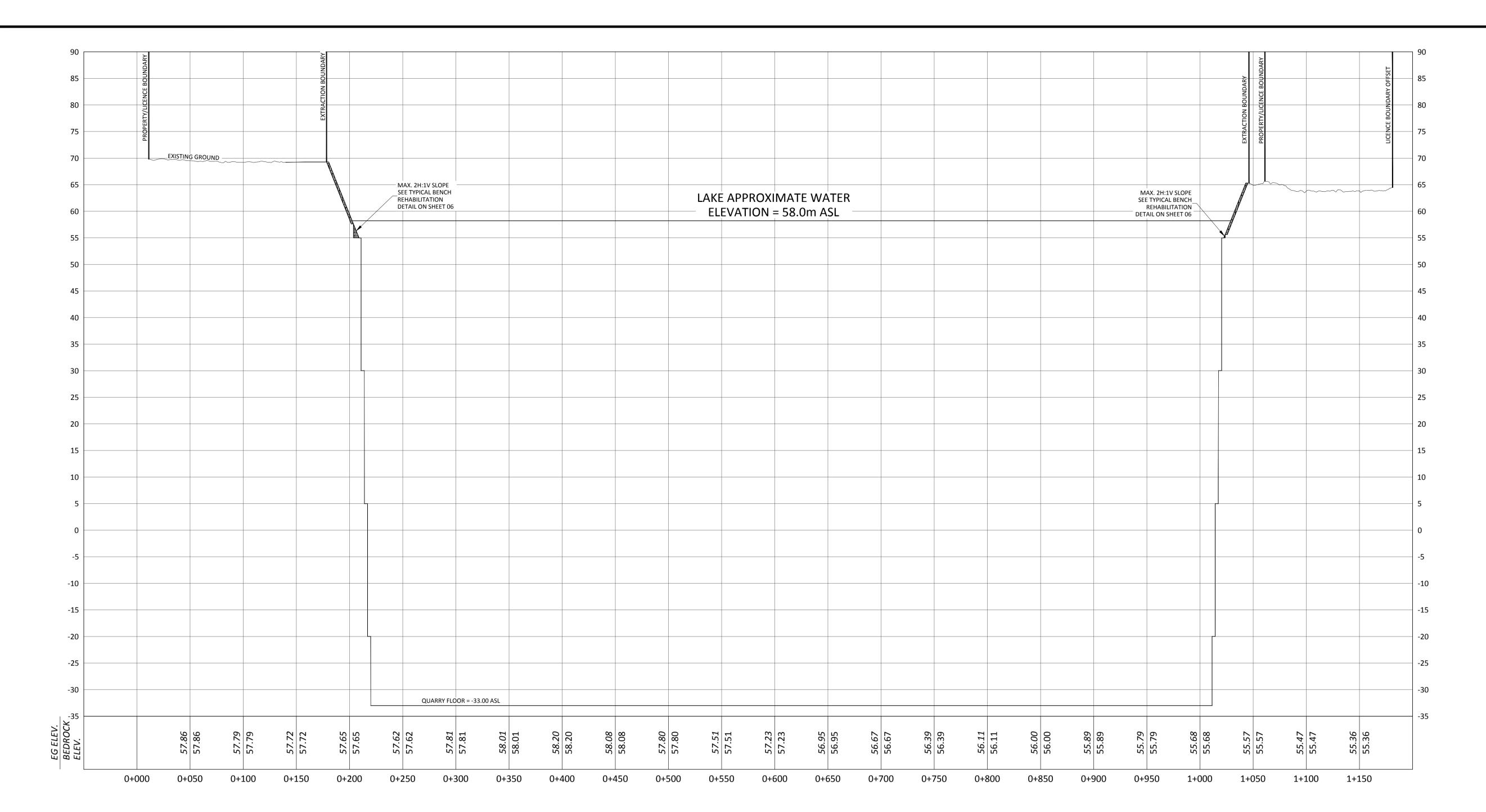
CORNWALL GRAVEL COMPANY LIMITED

Project: MACLEOD 5

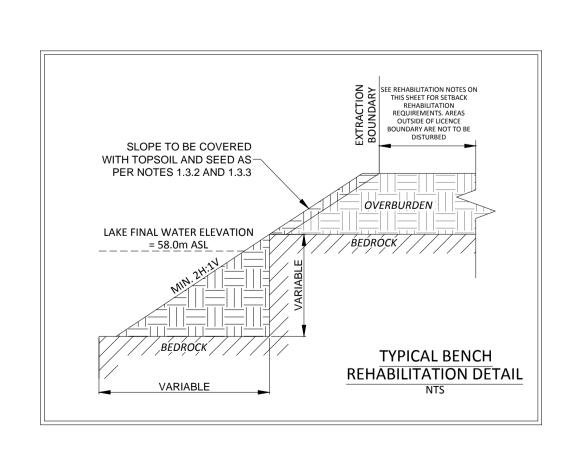
CATEGORY 1 CLASS "A" PIT BELOW WATER CATEGORY 2 CLASS "A" QUARRY BELOW WATER

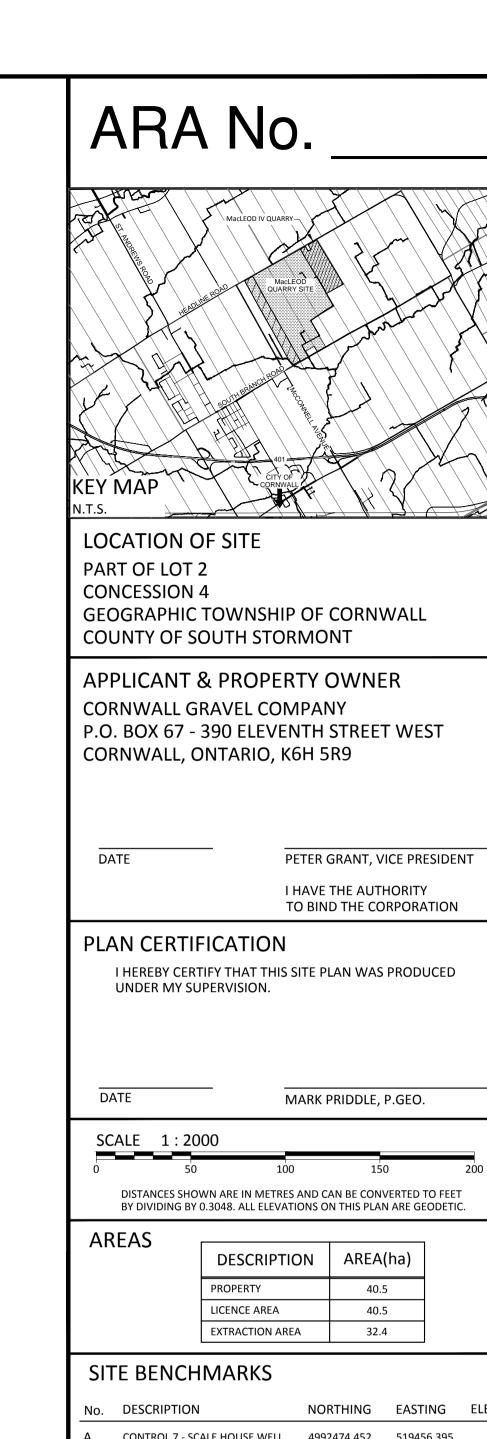
REHABILITATION PLAN

Drawn By:	DL	Project Number:	
Checked By:	MP		CP-16-0280
Paper Size: 24" x 36"	Scale: 1:2000	Drawing Number:	
21 7.33	(metric)	Sheet 6 of 8	06
Date: AUG 1	7 2017		



ΓE





NORTHING EASTING ELEVATION A CONTROL 7 - SCALE HOUSE WELL 4992474.452 519456.395 74.613

Date Amendment NOT FOR CONSTRUCTION



115 Walgreen Road R.R. #3, Carp, ON KOA 1LO Fax: 613-836-3742

Tel: 613-836-2184 Client:

CORNWALL GRAVEL COMPANY LIMITED

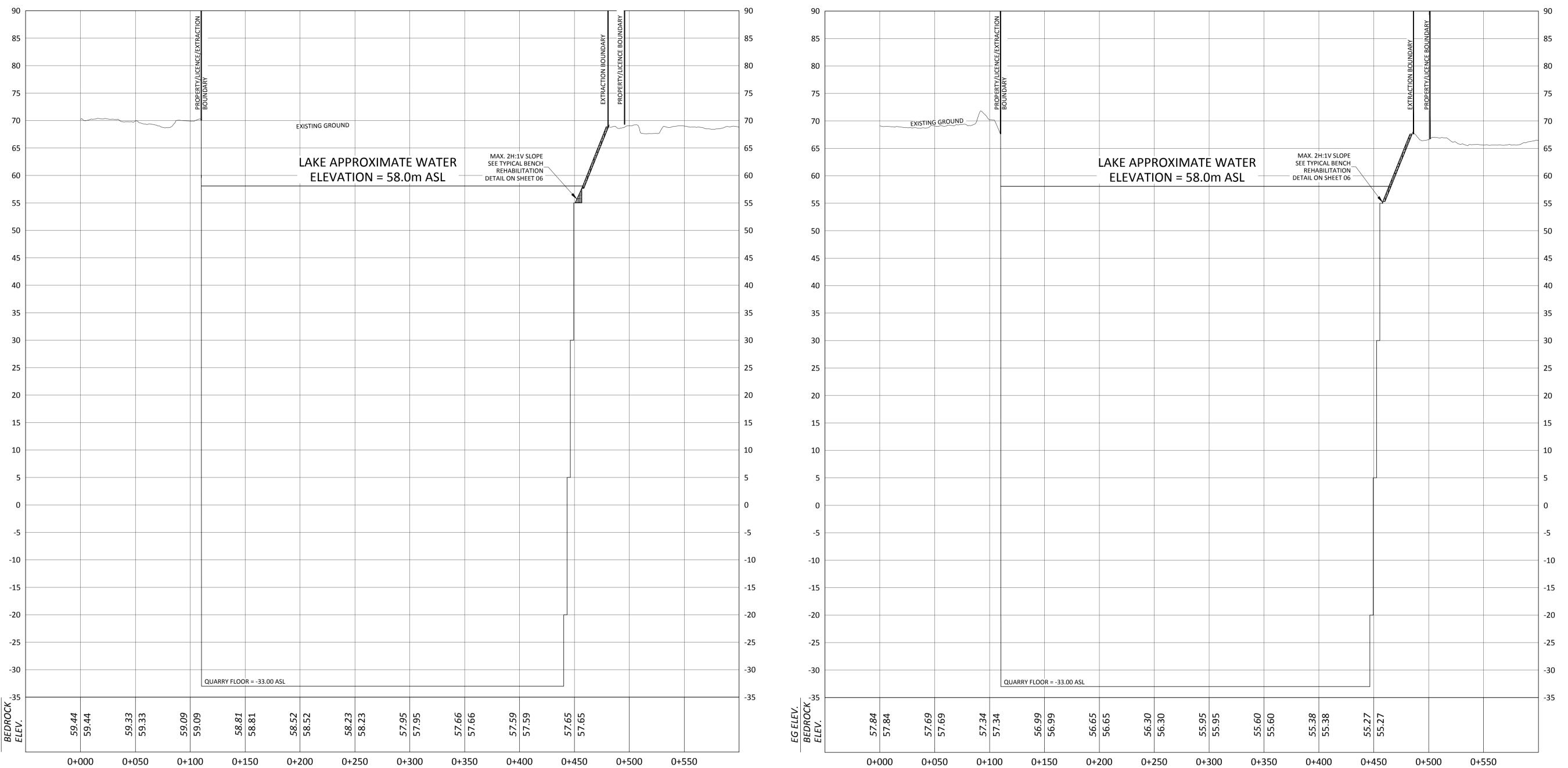
Project:

MACLEOD 5 CATEGORY 1 CLASS "A" PIT BELOW WATER CATEGORY 2 CLASS "A" QUARRY BELOW WATER

Drawing Title:

REHABILITATION SECTIONS (1)

Drawn By:	DL	Project Number:	
Checked By:	MP		CP-16-0280
Paper Size: 24" x 36"	Scale: 1:2000 (metric)	Drawing Number: Sheet 7 of 8	07
Date: AUG.	17, 2017		.



NO.	VARIATIONS FROM OPERATIONAL STANDARDS	APPROVED BY INSPECTOR	DATE
	NO EXCAVATION SETBACK ALONG THE WEST BOUNDARY THAT ABUTS WITH CORNWALL GRAVEL PROPERTIES		
	A COMMON BOUNDARY AGREEMENT DOWN TO ELEV33.0m BETWEEN MACLEOD IV AND MACLEOD V ALONG WEST BOUNDARY		
	NO FENCING ALONG THE WEST BOUNDARY THAT ABUTS WITH CORNWALL GRAVEL PROPERTIES		
	EXCESS TOPSOIL MAY BE REMOVED FROM THE SITE		
	EXCESS OVERBURDEN MAY BE REMOVED FROM THE SITE		



NORTHING EASTING ELEVATION A CONTROL 7 - SCALE HOUSE WELL 4992474.452 519456.395 74.613

NO.	Amendment	Date
	FOR REVIEW ONL	7
	NOT FOR CONSTRUCTION	



115 Walgreen Road R.R. #3, Carp, ON KOA 1LO Tel: 613-836-2184 Fax: 613-836-3742

Project:

MACLEOD 5

CORNWALL GRAVEL COMPANY LIMITED

CATEGORY 1 CLASS "A" PIT BELOW WATER CATEGORY 2 CLASS "A" QUARRY BELOW WATER

Drawing Title: REHABILITATION SECTIONS (2)

Drawn By:	DL	Project Number:	
Checked By:	MP		CP-16-0280
Paper Size:	Scale:	Drawing Number:	
24" x 36"	1:2000 (metric)	Sheet 8 of 8	08
Date: AUG.	17, 2017		