



24 September 2025

Reference No. CA0033354.8741_300

Kevin Kehl, Manager of Licensing, Approvals and Compliance
Aggregates & Construction Division
Waker Aggregates Inc.

REVIEW OF THE AGGREGATE RESOURCES ACT SITE PLANS REGARDING BLASTING
WALKER AGGREGATES, DUNTROON QUARRY
9861 COUNTY RD 91, DUNTROON, ONTARIO

Walker Aggregates Inc. (Walker) is preparing a Site Plan amendment to their Duntroon Quarry and Duntroon Quarry Expansion (Site) Aggregate Resources Act licences. Walker is proposing to deepen the limit of extraction in portions of the licenced lands. This letter provides a summary of our findings in regard to blasting implications from the deepening. In summary, we conclude that there are no adverse impacts with the proposed deepening from a blasting perspective and that appropriate mitigation is in place at the Site.

INTRODUCTION

Currently, extraction at the Duntroon Quarry is permitted to between 485 and 490 MASL in certain portions of the operation and to a depth 500 MASL in other locations. The proposed amendment would allow for extraction to between 485 and 490 MASL across the entire site. WSP understands that there are no changes proposed to the existing plant locations and equipment operating on site. The Aggregate Resources Act (ARA) Site Plans for the Walker's Duntroon Quarry and Duntroon Quarry Expansion are attached. These Site Plans were prepared by MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC) and were approved by the Minister of Natural Resources and Forestry in September 2014.

BLASTING

The ARA Site Plans, provided by Walker were reviewed by WSP Canada Inc (WSP). The following is a summary of the site plan notes as they relate to blasting issues.

- Blasting could occur daily in accordance with provincial standards. Standard blasting hours are Monday to Friday from 8:00 AM to 5:00 PM and Saturday from 8:00 AM to 3:00 PM. Blasting will not occur on Sundays or on a Statutory Holiday or between the hours of 8:00 PM on any day and 8:00 AM the following day.

- A Blast Design Report, commonly referred in the industry as a Blast Impact Assessment (BIA), was prepared for the Duntroon Quarry Expansion by Golder Associates Ltd. (Golder) and presented in September 2005. An addendum to the assessment was submitted by Golder on September 23, 2007.
- All blasts are to be monitored for ground vibrations and air overpressure and will operate to ensure compliance with current provincial guidelines. These guidelines are set out in the Ontario Ministry of the Environment, Conservation and Parks (MECP) document NPC-119 and have a guideline ground vibration limit of 12 mm/s and an air overpressure limit of 128 dB (linear decibels). The purpose of the BIA, mentioned above, is to assess whether the blasting at the proposed quarry can remain compliant with the NPC 119 limits set by MECP.
- All blast monitoring reports are to be retained by Walker and made available upon request by the Ministry of Natural Resources for audit purposes. According to the ARA (Ontario Regulation 466/20), blast monitoring reports shall be retained for a period of seven years after each blast. The blast monitoring report will also inform future blast design changes, if necessary.
- When blasting within 350 metres of a receptor, the maximum explosive weight detonated per delay may be adjusted by one of the following three options to ensure compliance with the MECP guideline:
 - a) reduce the bore hole diameter with a corresponding reduction in the drill pattern.
 - b) introduce decked charges within each bore hole.
 - c) reduce the bore hole length (depth) by reducing the bench height.

SUMMARY

WSP has reviewed the ARA Site Plans for the Duntroon Quarry and Duntroon Quarry Expansion provided by Walker. The following is a summary of our findings:

- Blasting is currently carried out in accordance with provincial standards.
- A Blast Impact Assessment was prepared for the initial quarry development and cited in the ARA Site Plans for the expansion.
- The following mitigation measures related to the quarry blasting are provided on the ARA Site Plans:
 - All blasts will be monitored for ground vibrations and air overpressure and will operate to ensure compliance with NPC-119.
 - Blast monitoring reports will be prepared and retained for a period of seven years, as stipulated by the ARA. These can be used for audits and inform blast design changes, if necessary.
 - Should blast design changes be necessary to comply with NPC-119, example parameters were listed within the Site Plans.

- The ARA Site Plan notes for the original Duntroon Quarry do not reference blasting. The blast mitigation measures listed above are appropriate for the proposed deepening of both the Duntroon Quarry and the Duntroon Quarry Expansion.

CLOSURE

This letter provides a summary of the blasting related ARA Site Plan Notes for Walker's Duntroon Quarry and Duntroon Quarry Expansion. We confirm that there are no adverse impacts with the proposed quarry deepening from a blasting perspective. It is WSP's professional opinion that appropriate mitigation measures to enable compliance with current provincial guidelines have been listed with the ARA Site Plans. Should you have any questions or concerns, please do not hesitate to contact the undersigned.

Yours truly,

WSP Canada Inc.

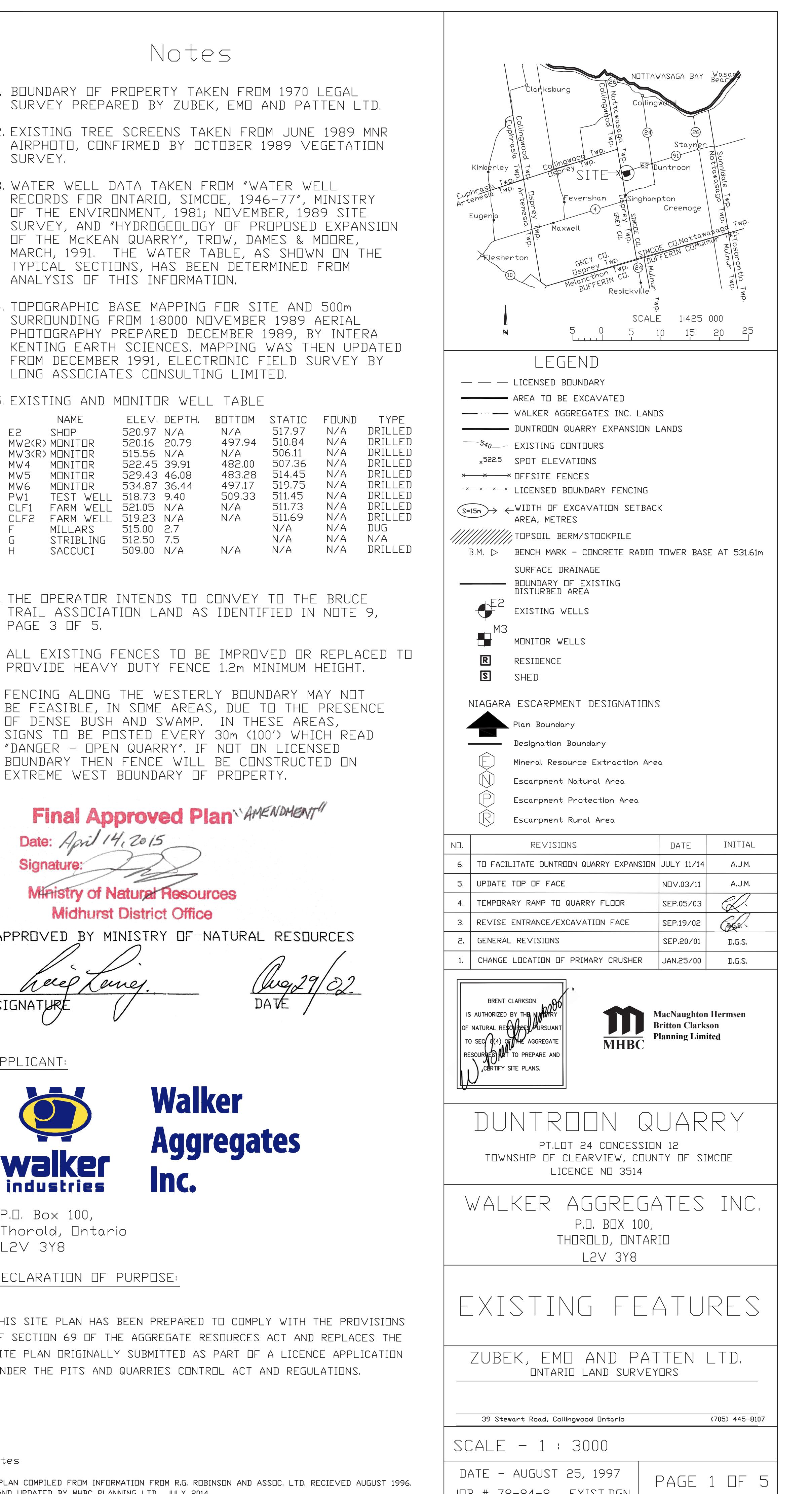
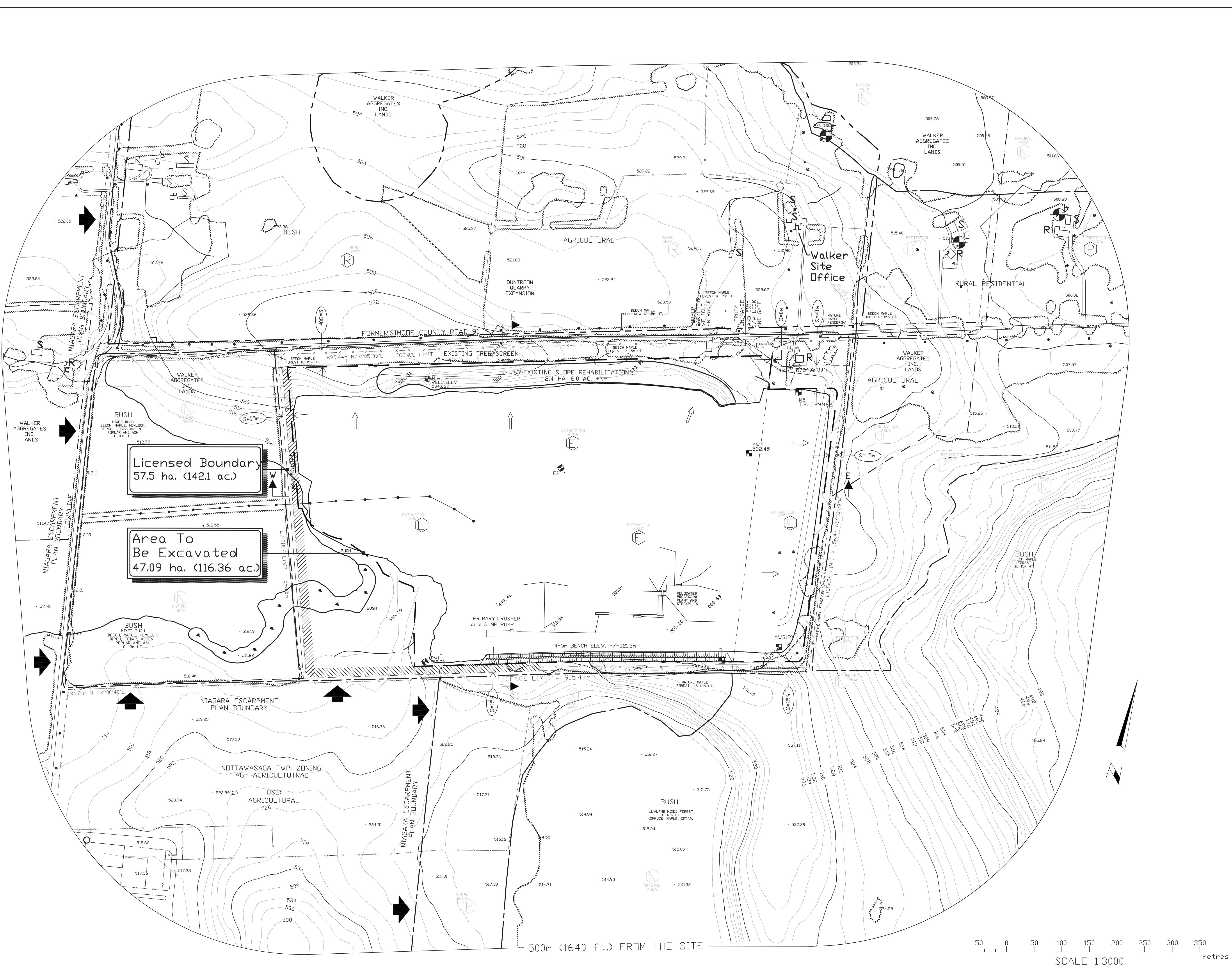


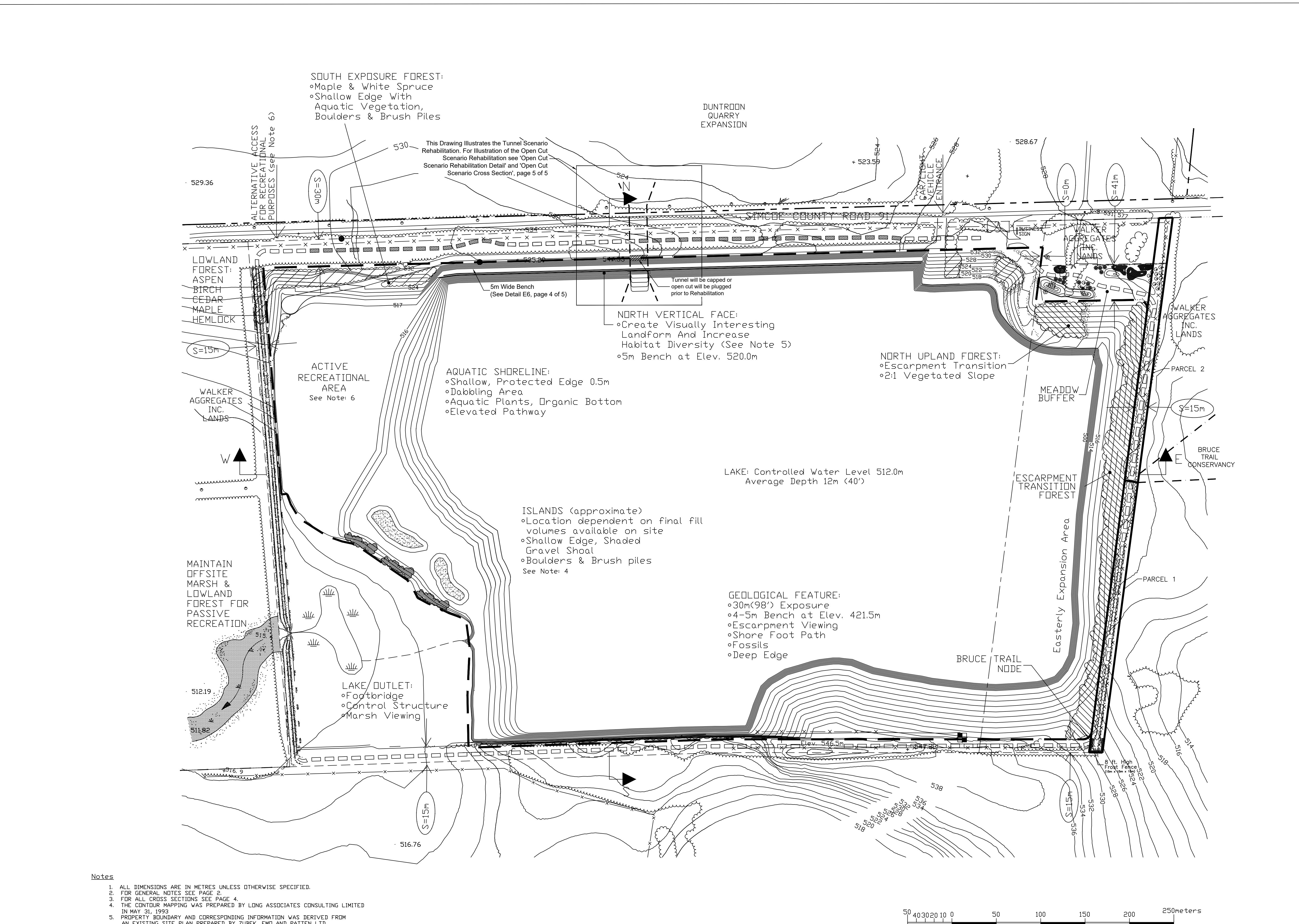
Daniel Corkery
Principal Blasting Consultant

DJC/KJF/jl

Attachments: ARA Site Plans - Duntroon Quarry
ARA Site Plans - Duntroon Quarry Expansion

ATTACHMENT
ARA Site Plans
Walker Duntroon Quarry -MNR
Approved April 14.2015





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THE DUNTRON QUARRY COMPRISING OF A LICENSED AREA OF 49.81 ha. (123.08 ac.) WAS LICENSED AS P710197 DURING THE EARLY 1970'S. AN ADDITIONAL 7.5 ha. WAS LICENSED IN JUNE 1992 AS P716459, SUBJECT TO A NIAGARA ESCARPMENT DEVELOPMENT PERMIT. THE TOTAL LICENSED AREA IS +/-57.5 ha (142.1 ac.) THE FINAL REHABILITATION PLAN PROVIDES FOR A 36.0 ha LAKE. THE LAKE SECTION OF THE QUARRY WILL BE EXCAVATED TO AN AVERAGE ELEVATION OF 500.0m. PERIMETER ELEVATIONS VARY SUBSTANTIALLY FROM 512.0m, NEAR THE SOUTHWEST CORNER TO 546.5m, AT THE PEAK OF THE GEOLOGICAL FEATURE IN THE SOUTHEAST SECTOR.

A VARIETY OF LAKE EDGE TREATMENTS ARE PROPOSED, TO SUPPORT A RANGE OF COMPLIMENTARY AFTER USES. ACTIVITIES IN THE EASTERLY SECTOR WILL INCLUDE AN ACTIVE TRAIL SYSTEM AREA AND REFORESTED SLOPES. THE 546.5m HEIGHT OF LAND WILL BE RETAINED, AS A GEOLOGICAL FEATURE, PROVIDING A SUBSTANTIAL EXPOSURE OF THE AMABEL DOLOSTONE AND FOSSILS, INCLUDING CRINIDS, STROMATOPORIDS, CORALS, NAUTILIDS AND BRACHIOPODS. A FENCE SHALL BE ERECTED AT THE TOP OF THE FEATURE TO THE SATISFACTION OF THE MINISTRY OF NATURAL RESOURCES.

THE WESTERLY EDGE ABUTS AN UNLICENSED AREA, DESIGNATED ESCARPMENT NATURAL AREA, SUPPORTING A MIXED LOWLAND WOODLOT. THIS SHORELINE WILL SUPPORT A SHALLOW, PROTECTED EDGE, WITH AQUATIC PLANTS AND ORGANIC BOTTOM, TO PROVIDE A DEGREE OF WATERFOWL HABITAT. AQUATIC PLANT SPECIES WILL BE SELECTED AND ESTABLISHED DURING THE FINAL STAGES OF LAKE AND SHORELINE DEVELOPMENT.

THE EXISTING BERM LOCATED ALONG THE WESTERLY LIMIT OF THE SITE, TO BE USED FOR BACKFILL ALONG ENTIRE ELEVATION TO CREATE ISLANDS LOCATED IN LAKE PORTION OF THE QUARRY.

PORTIONS OF THE NORTHERLY SHORELINE WILL BE DEVELOPED WITH ACCESS ROAD AND UPLAND FOREST, WITH SOUTH EXPOSURE, TO EXTEND THE EXISTING IMMATURE FOREST BUFFER. THE REMAINING PORTION OF THE NORTHERLY SHORELINE MAY BE LEFT EXPOSED AS VERTICAL FACE, WITH A 5.0m WIDE BENCH AT ELEVATION 520.0. THIS WILL CREATE A VISUALLY INTERESTING LANDFORM AND INCREASE HABITAT DIVERSITY.

THE FINAL REHABILITATION PLAN INCLUDES 5 SPECIFIC FEATURES. AS SHOWN, TO PROVIDE FOR RECREATIONAL AND NATURAL RESOURCE ACTIVITIES AND CONNECTION TO THE BRUCE TRAIL SYSTEM. AN AREA TO ACCOMMODATE RECREATIONAL ACTIVITIES MAY BE PROVIDED IN THE NORTHWEST CORNER. THE AREA SHALL BE GRADED AND SEEDED ACCORDINGLY. AN ALTERNATIVE ACCESS TO THE RECREATIONAL AREA AT LOCATION SHOWN IS

| | | |
|---|-----------|--------|
| FACE TO SHOW 5m WIDE BENCH EL/OPEN CUT INFORMATION | MAR.16/15 | D.G.S. |
| E DUNTRUON QUARRY EXPANSION | JLY.11/14 | A.J.M. |
| ENERAL REVISIONS | JLY.16/12 | A.J.M. |
| ERTH FACE & NOTES 5 AND 9 | NOV.03/11 | A.J.M. |
| TRANCE/EXCAVATION FACE | SEP.19/02 | D.G.S. |
| ENCE/SHIFT CONVEYANCE LINE | AUG.14/02 | D.G.S. |
| S PER TOWNSHIP COMMENTS | FEB.13/02 | D.G.S. |
| ENERAL REVISIONS | SEP.17/01 | D.G.S. |
| ENERAL REVISIONS | AUG.30/01 | D.G.S. |
| ENERAL REVISIONS | AUG.27/01 | D.G.S. |
| ENERAL REVISIONS | AUG.13/01 | D.G.S. |

STROON QUARRY

| | |
|--|--|
| LICENCE NO 3514 | |
| R AGGREGATES INC. | |
| P.O. Box 100, Thorold, Ontario L2V 3Y8 | |
| PROGRESSIVE BILITATION PLAN | |

L2V 3Y8

EMO AND PATTEN LTD.
ONTARIO LAND SURVEYORS

ad, Collingwood Ontario (705) 445-4910

OCT.9, 1997
-8, REHAB.DGN

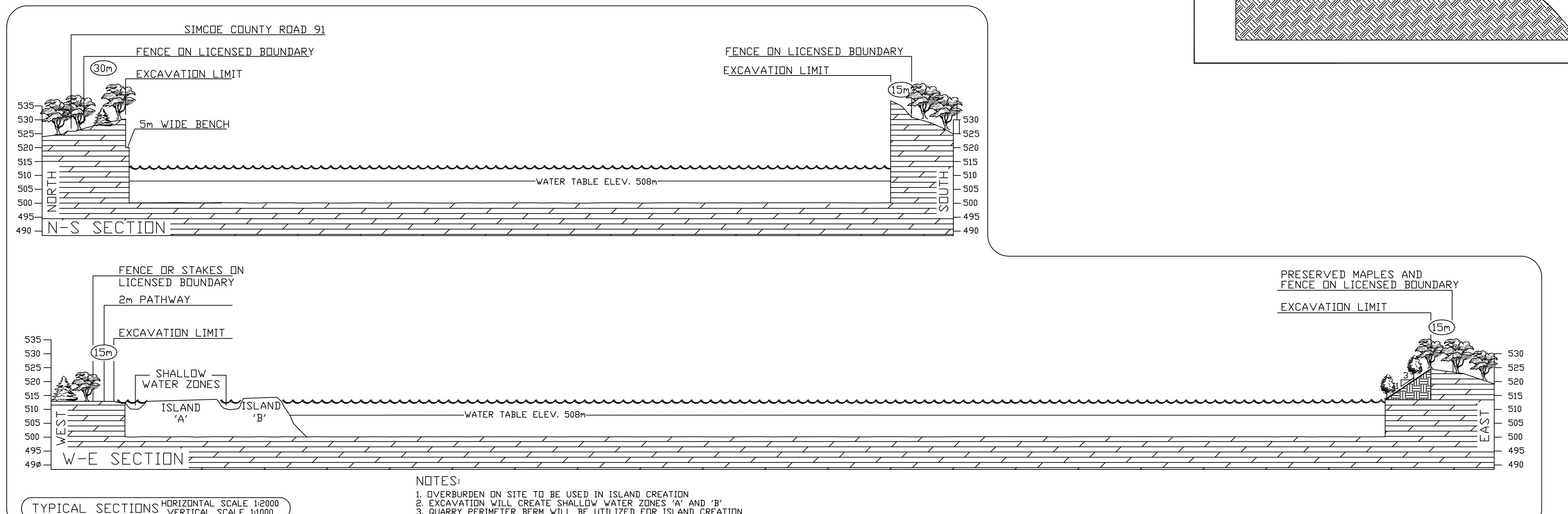
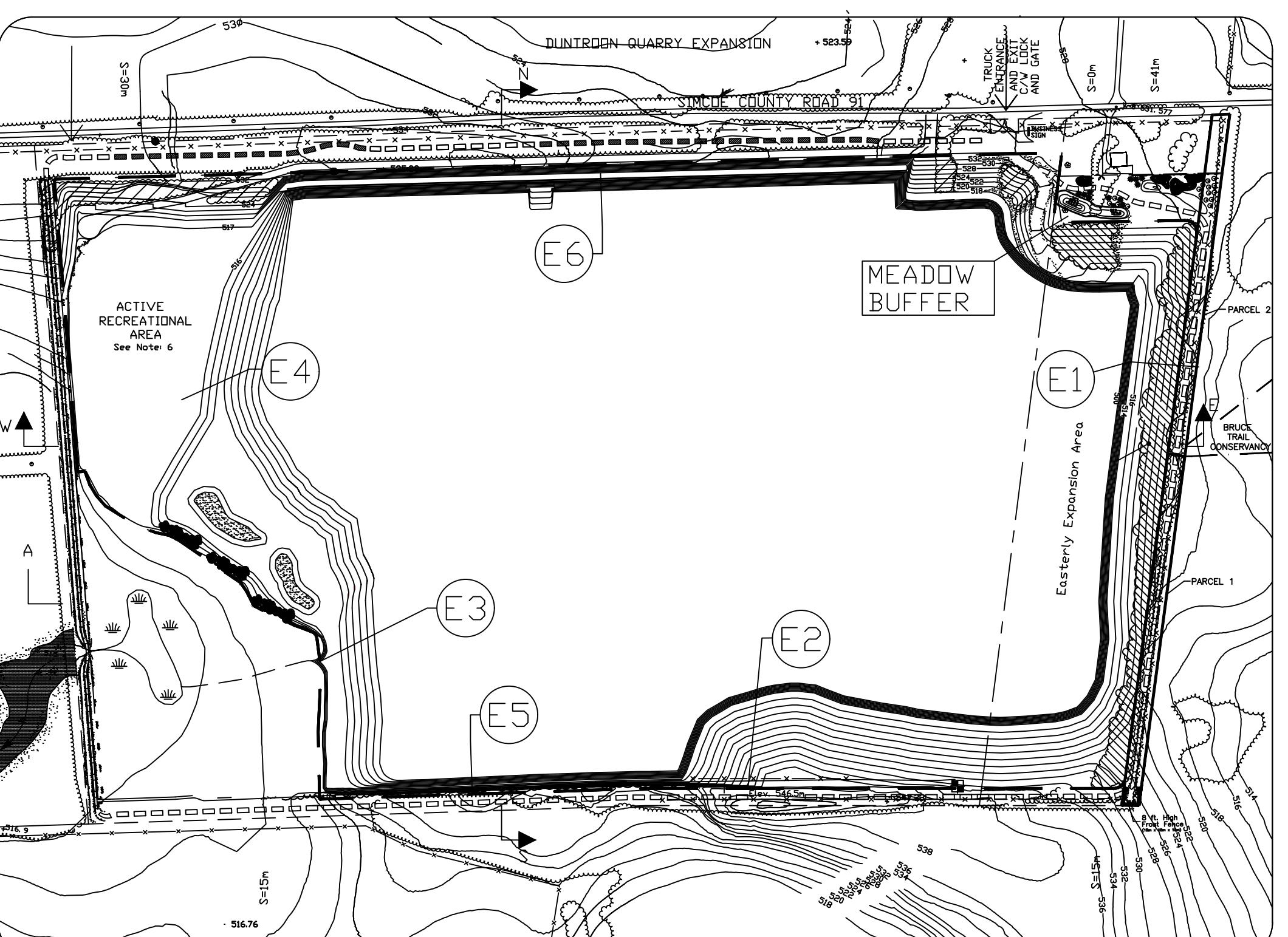
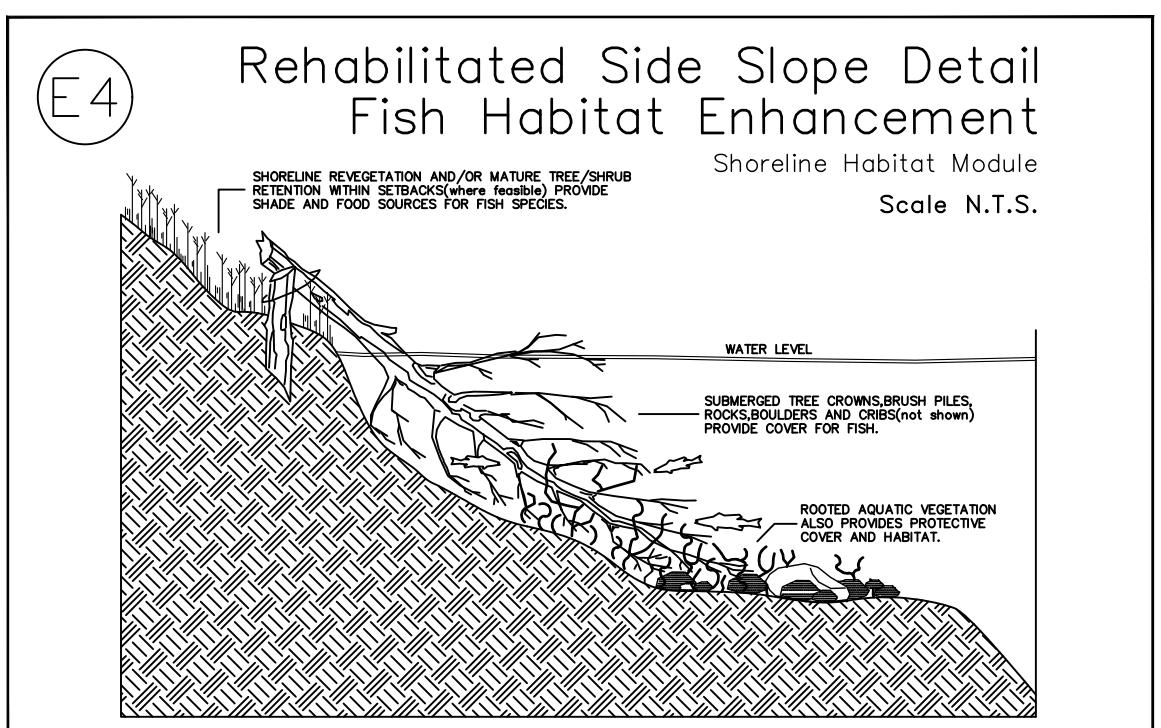
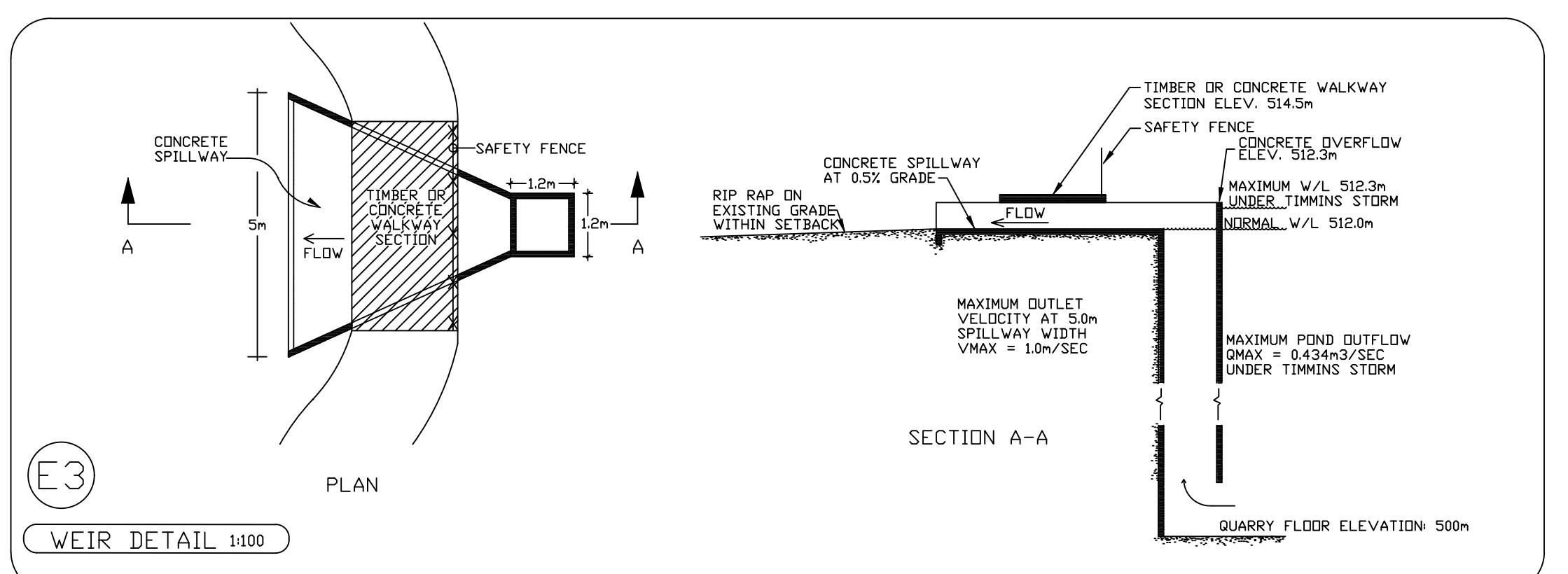
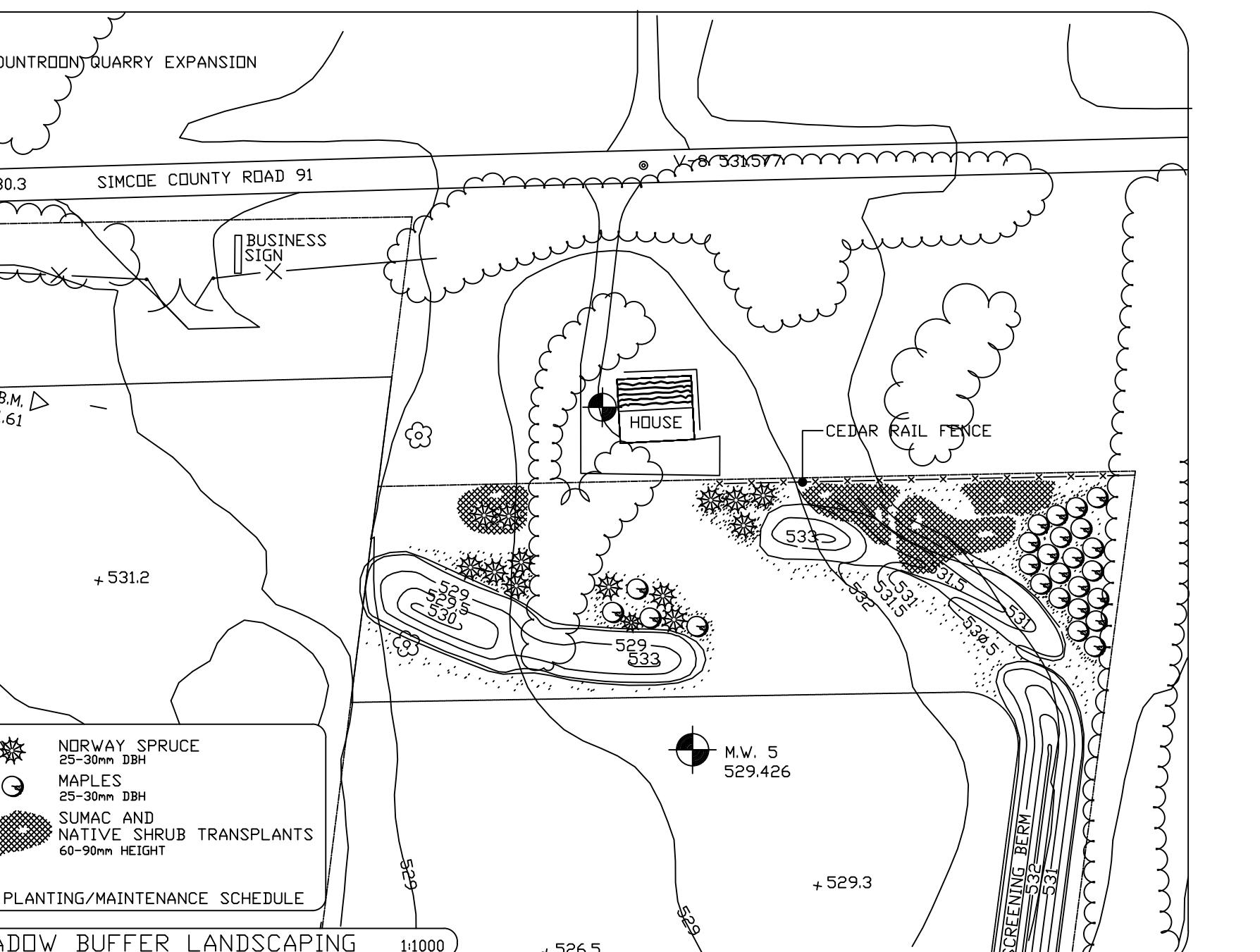
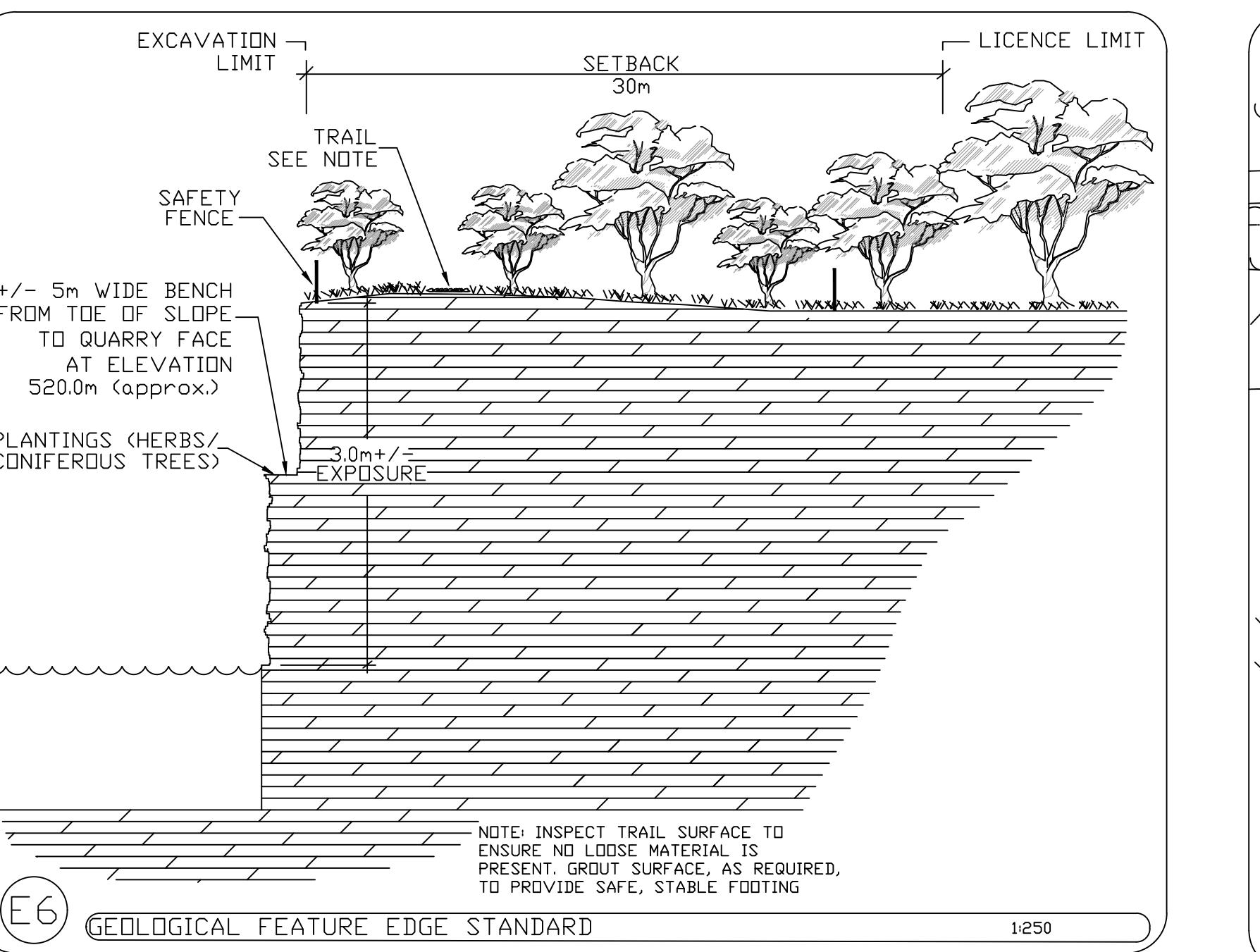
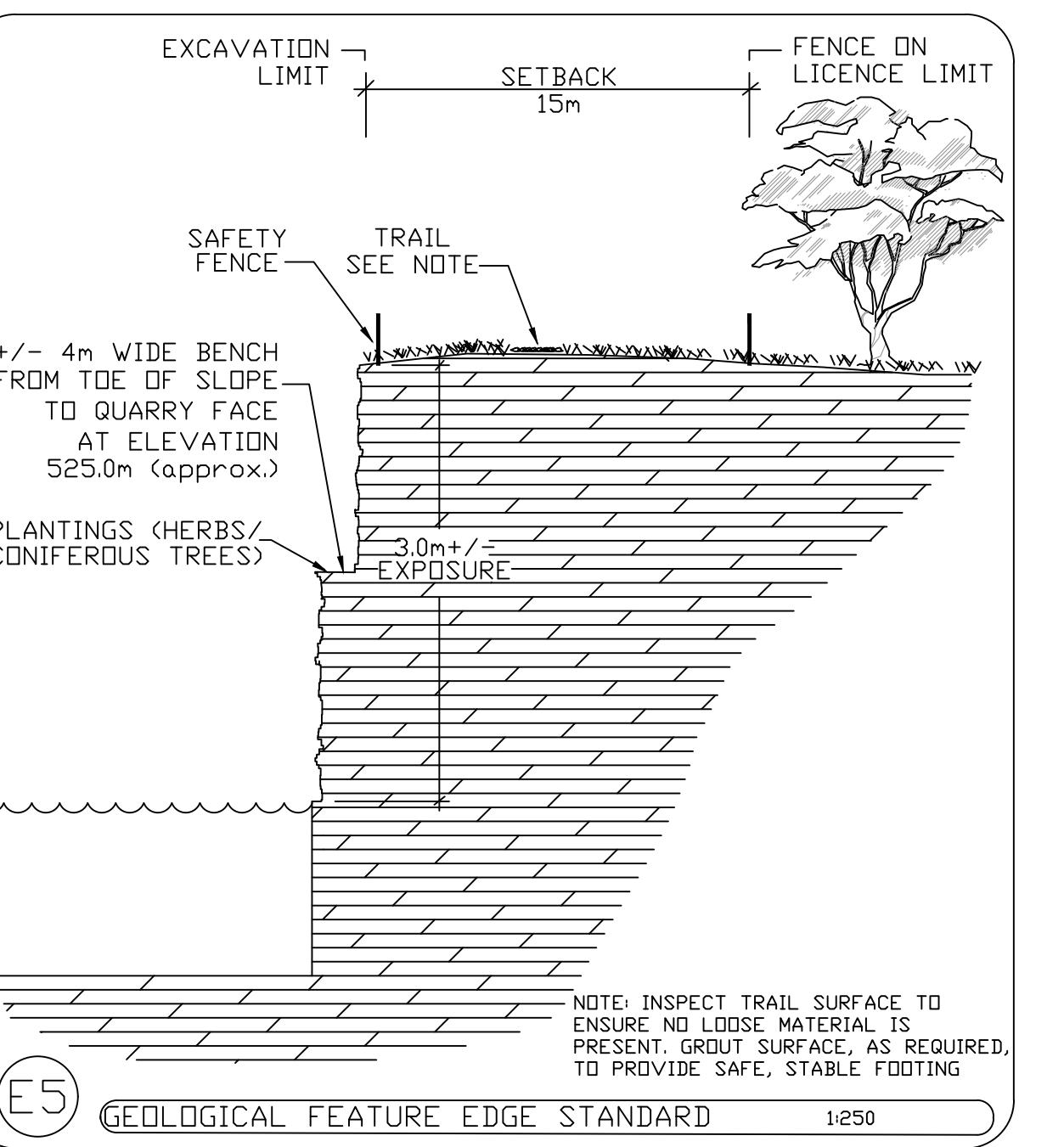
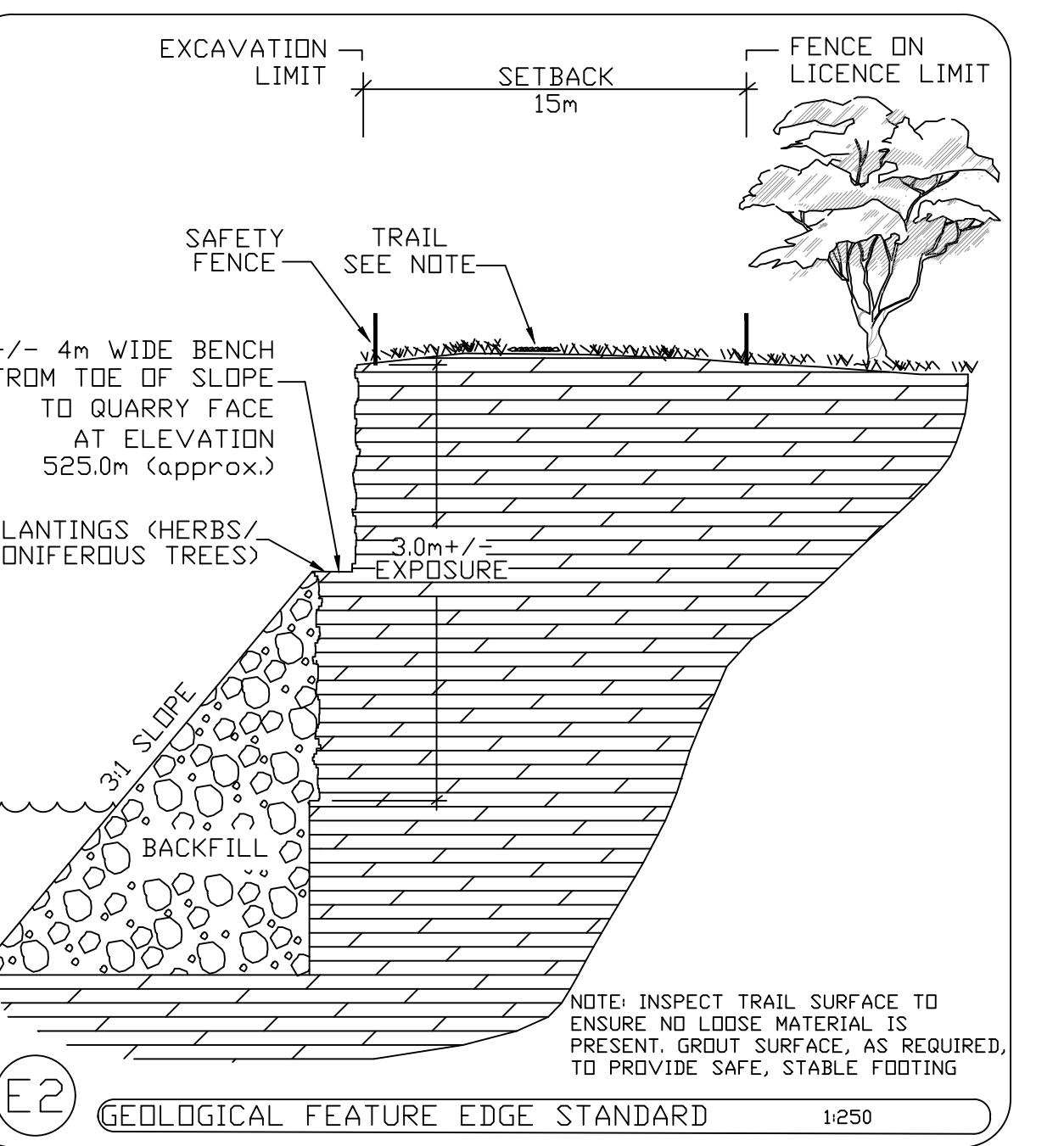
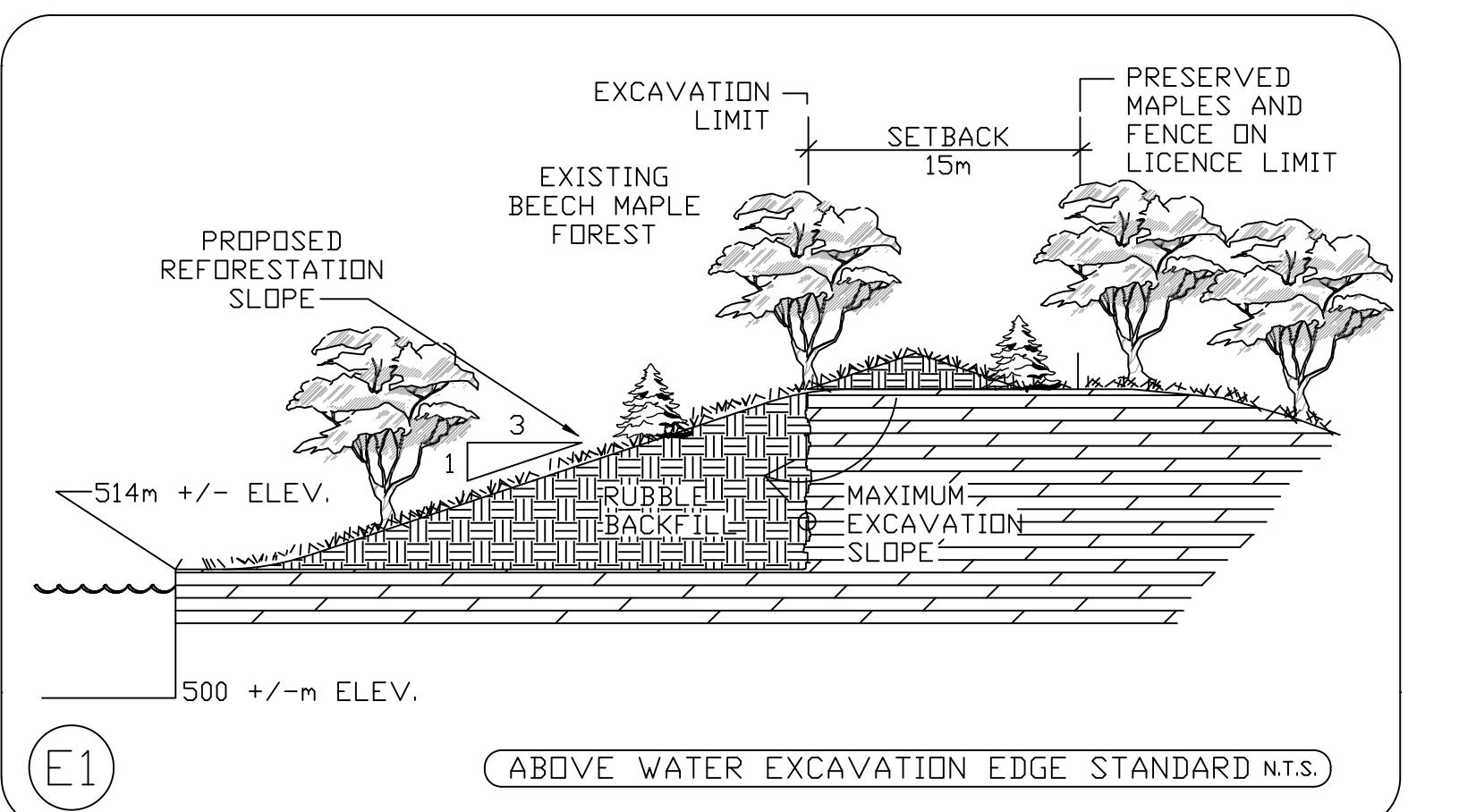
3/16/22

Section Components

- Meadow Buffer
 - o See Page 4
- Escarpment Transition Forest
 - o Beech, Maple, White Spruce
 - o Choke Cherry, Hawthorn, Sumac
 - o Legume and Wildflower Ground Cover
- Shoreline
 - o See Page 4 Edge Standards
- Aquatic Vegetation
 - o See Page 4
- South Exposure Forest
 - o Maple, White Spruce
 - o Sumac, Choke Cherry,
 - o Crab Apple, Hawthorn
 - o Legume and Wildflower Ground Cover
 - o See this Page

thern Development,
resources and Forestry
ROVED
legate Resources Act
ril 14, 2015

resources and Forestry
PROVED
Aggregate Resources Act
April 14, 2015



Notes
1. PLAN COMPILED FROM INFORMATION FROM DRAWINGS BY R.G. ROBINSON AND ASSOC. LTD. RECEIVED AUGUST 1996, AND UPDATED BY MHBC PLANNING LTD., MARCH 2015.

PART OF LOT 24
CONCESSION 12
(FORMERLY TOWNSHIP OF NOTTAWASAGA)
TOWNSHIP OF CLEARVIEW
COUNTY OF SIMCOE

| | | | |
|----|---|------------|---------|
| 12 | REVISE NORTH FACE TO SHOW 5m WIDE BENCH | MAR.16/15 | D.G.S. |
| 11 | TO FACILITATE DUNTRON QUARRY EXPANSION | JULY.11/14 | A.M. |
| 10 | ADD 'E6' DETAIL AS PER MNR COMMENTS | SEP.10/14 | D.G.S. |
| 9 | GENERAL REVISIONS | JULY.6/12 | A.M. |
| 8 | REVISE NORTH SOUTH CROSS SECTION | NOV.6/11 | A.M. |
| 7 | REVISE ENTRANCE/EXCAVATION FACE | SEP.19/02 | D.G.S. |
| 6 | ADD FROST FENCE/SHIFT CONVEYANCE LINE | AUG.14/02 | D.G.S. |
| 5 | REVISIONS AS PER TOWNSHIP COMMENTS | FEB.13/02 | D.G.S. |
| 4 | GENERAL REVISIONS | SEP.17/01 | D.G.S. |
| 3 | GENERAL REVISIONS | AUG.30/01 | D.G.S. |
| 2 | GENERAL REVISIONS | AUG.27/01 | D.G.S. |
| 1 | GENERAL REVISIONS | AUG.13/01 | D.G.S. |
| ND | REVISIONS | DATE | INITIAL |

BRENT CLARKSON
IS AUTHORIZED TO PRACTICE
OF NATURAL RESOURCES PURSUANT
TO SECTION 14 OF THE AGGREGATE
RESOURCES ACT TO PREPARE AND
CERTIFY SITE PLANS.

MHBC
MacNaughton Herremans
Brett Clarkson
Planning Limited

DUNTRON QUARRY
PART OF LOT 24 CONCESSION 12
TOWNSHIP OF CLEARVIEW, COUNTY OF SIMCOE
LICENCE NO 3514

WALKER AGGREGATES INC
P.O. BOX 100,
THOROLD, ONTARIO
L2V 3Y8

TYPICAL CROSS SECTIONS

ZUBEK, EMO AND PATTEN LTD.
ONTARIO LAND SURVEYORS

Ministry of Northern Development,
Mines, Natural Resources and Forestry

39 Stewart Road, Collingwood Ontario
(705) 445-4910

APPROVED
Under the Aggregate Resources Act

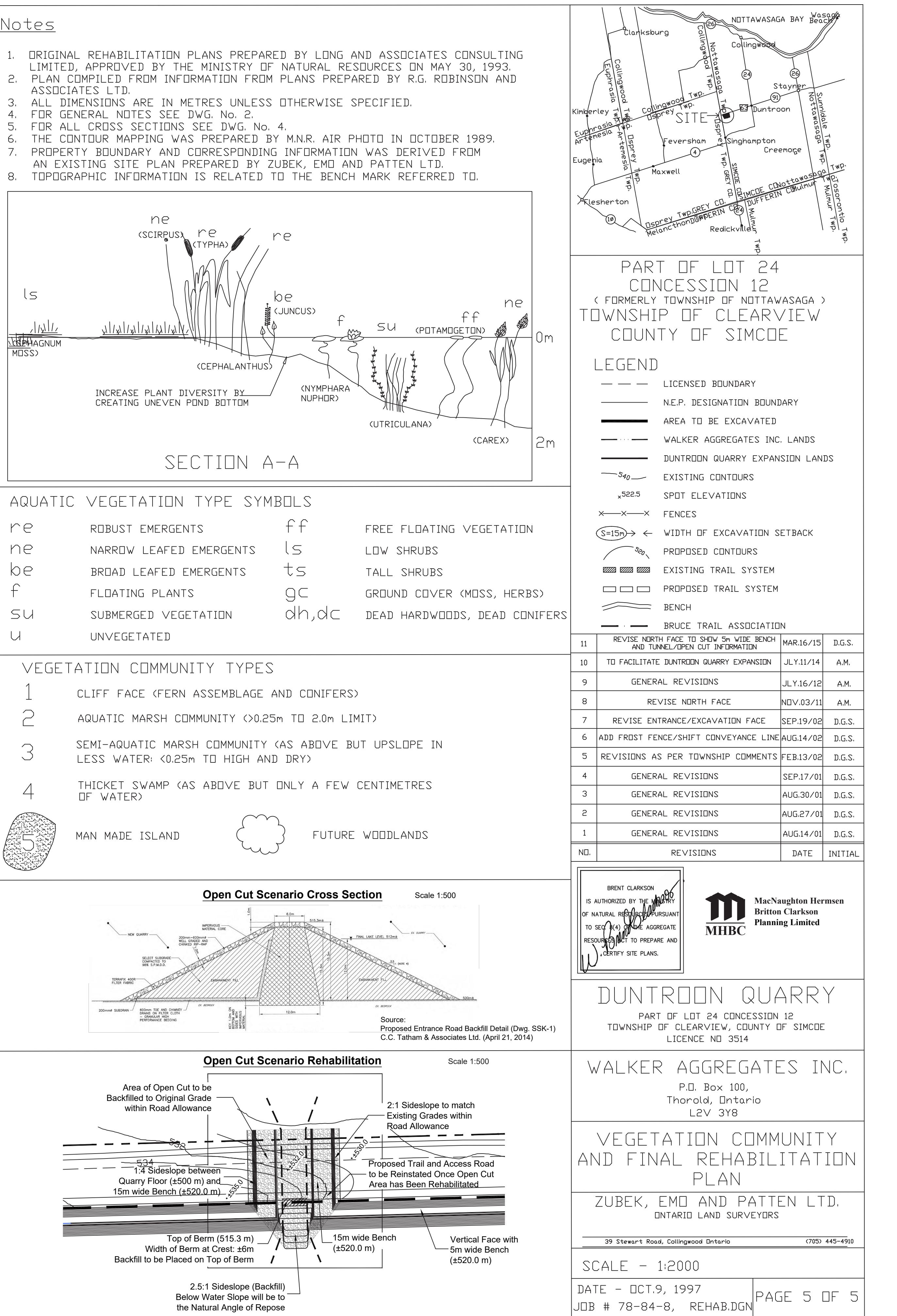
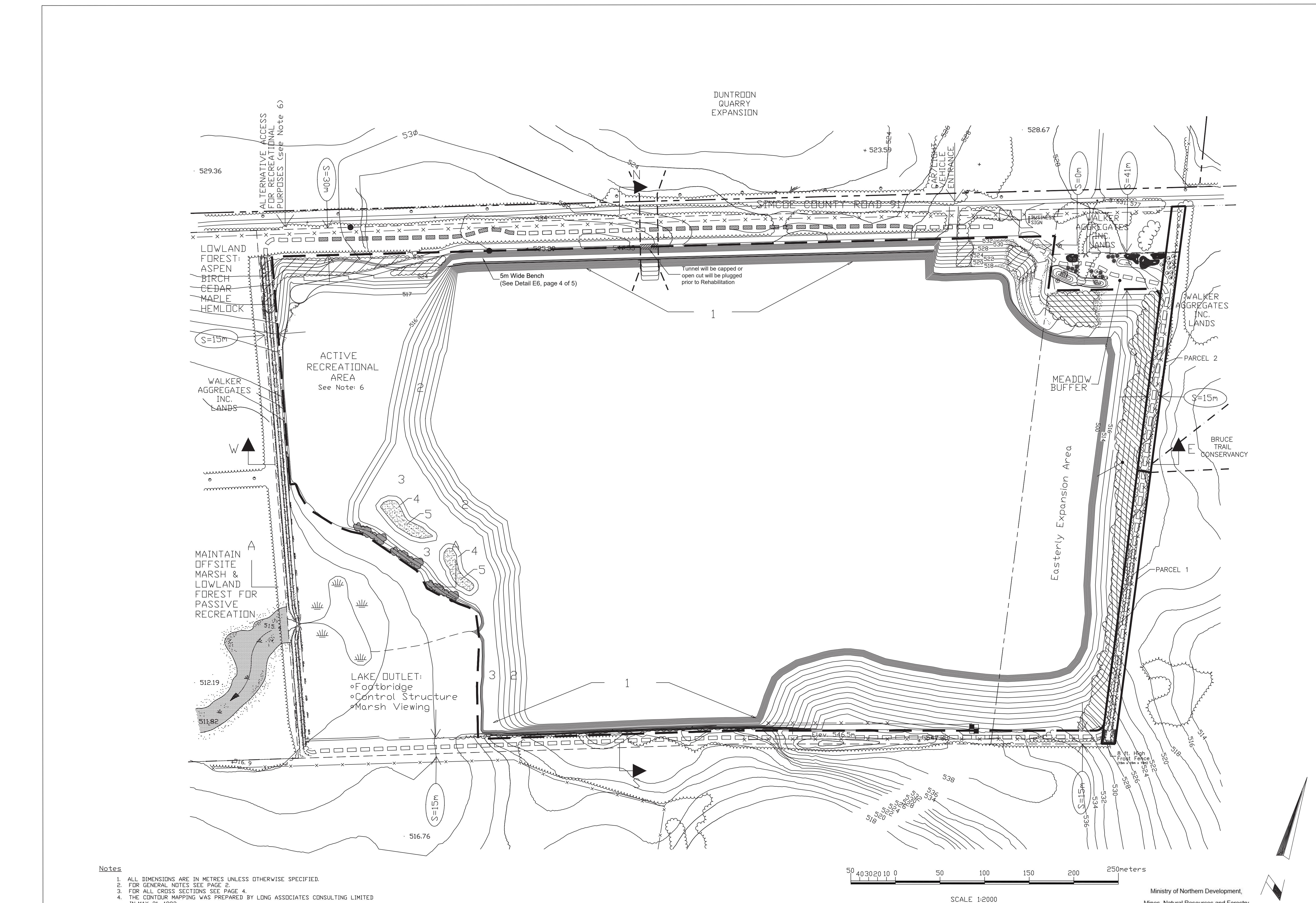
Date: April 14, 2015

SCALE - 1 : AS SHOWN

DATE - OCT.9, 1997

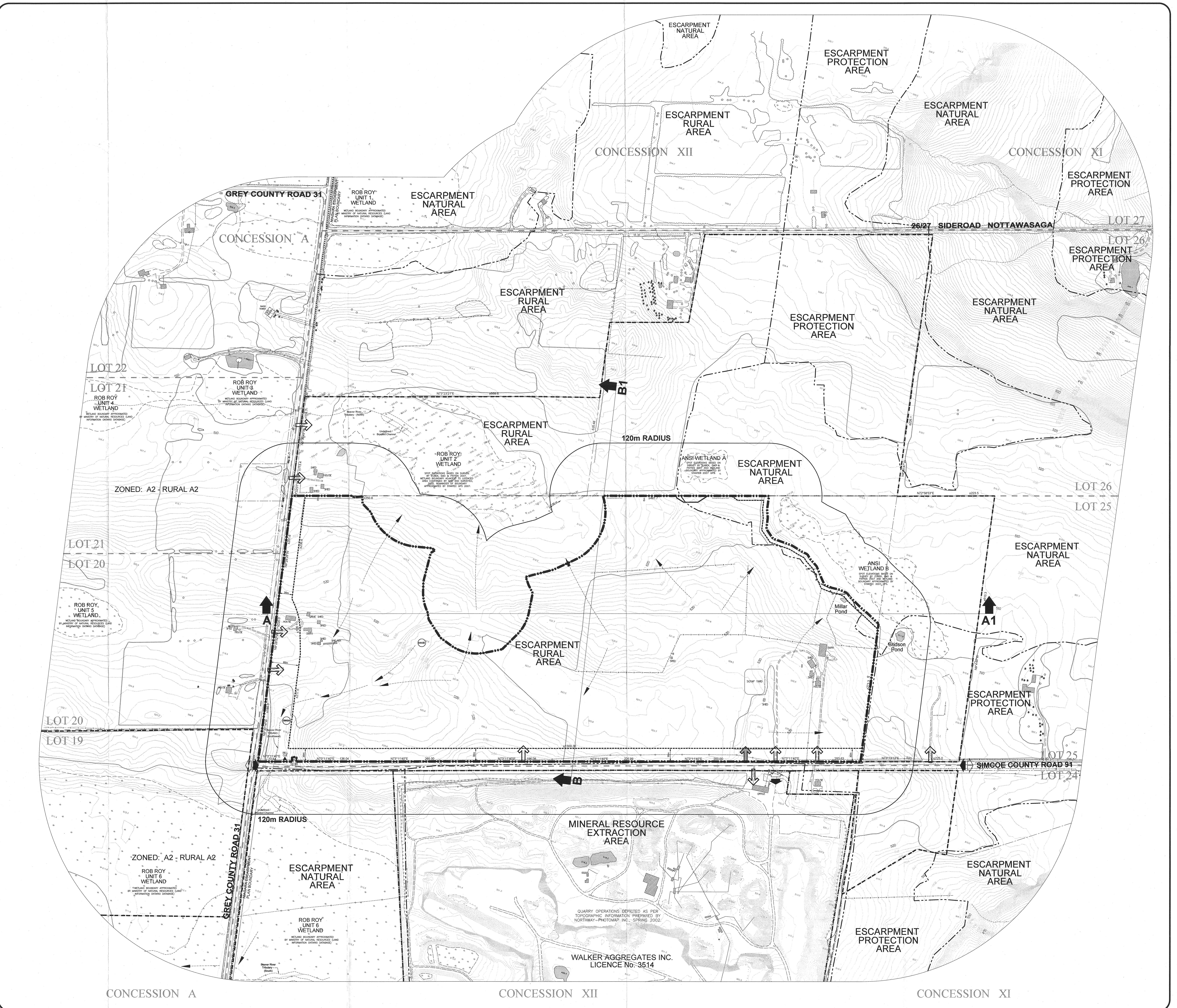
JOB # 78-84-8, REHAB.DGN

PAGE 4 OF 5



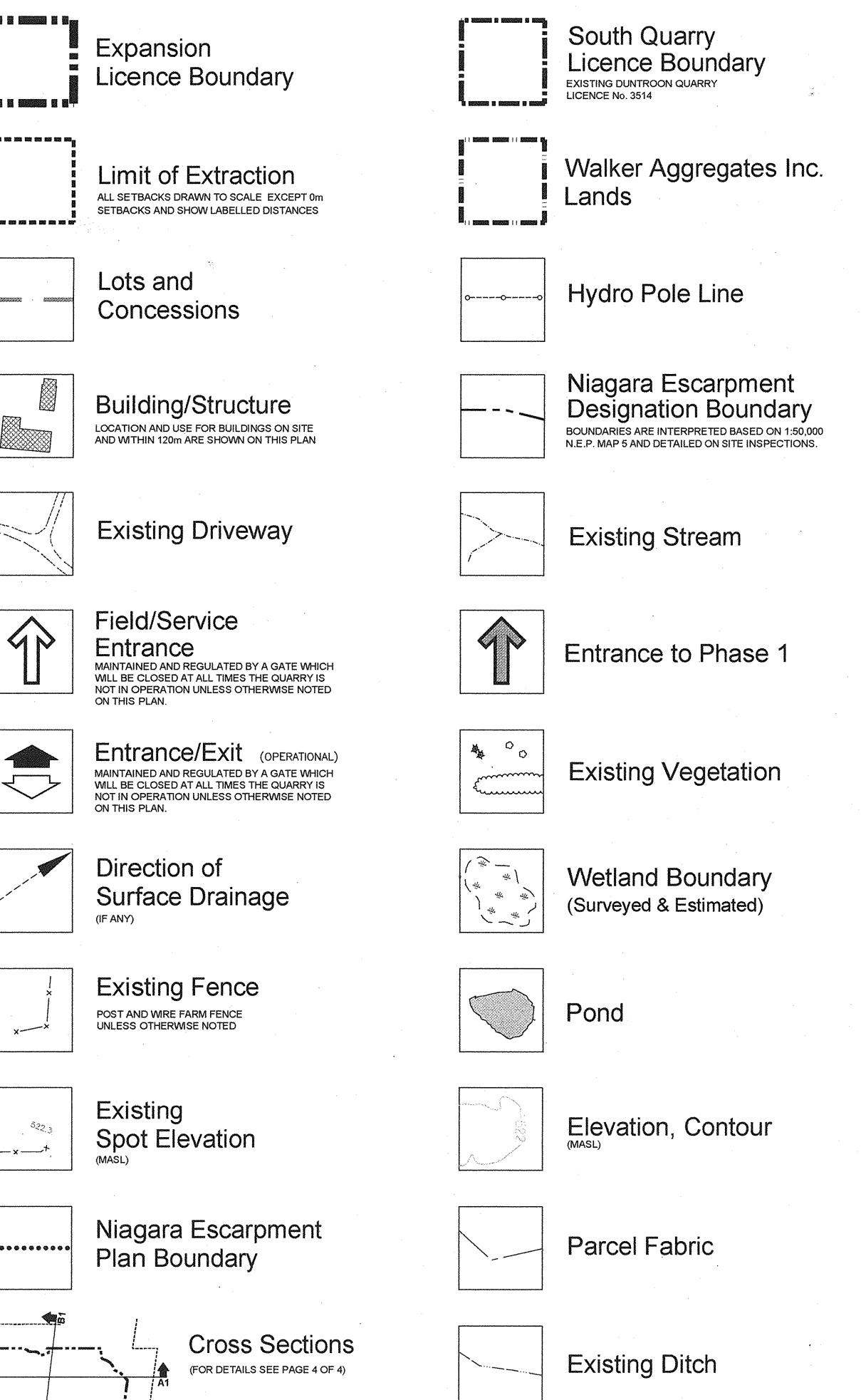
ATTACHMENT

**ARA Site Plans
Walker Duntroon Quarry Expansion
Approved September 2014**



Existing Features

Legend



NOTES:

1. TOPOGRAPHIC INFORMATION PREPARED BY NORTHWAY-PHOTOMAP INC. AND GENERATED FROM AERIAL PHOTOGRAPHY FLown IN SPRING OF 2002. CONTOUR INTERVAL IS 2.0m, WITH FULL 1.0m INTERPOLATED CONTOURS. ALL ELEVATIONS ARE INDICATED IN FEET. 2. LICENCE BOUNDARY COPIED FROM EXISTING AREA PLANS ORIGINALLY PREPARED BY ZUBER, EPO AND PARTNERS LTD., DAVE T. THOMPSON, SEPTEMBER 2002, AND PLAN 50-1078 PREPARED BY ZUBER, EPO AND PARTNERS LTD., JUNE 15, 1975. 3. ZONING INFORMATION OBTAINED FROM MUNICIPALITY OF GREY HIGHLANDS ZONING BY-LAW 10-1978, NIAGARA ESCARPMENT PLAN DESIGNATIONS TAKEN FROM TAP 5 NIAGARA ESCARPMENT PLAN, MINISTRY OF NATURAL RESOURCES, JUNE 1, 2003. 4. ALL MEASUREMENTS SHOWN ON THIS PLAN ARE IN METERS. 5. BOUNDARY OF AREA TO BE LICENSED IS 65.49 ha 162.93 (ac.) AREA TO BE EXTRACTED IS 58.41 ha 144.92 (ac.) 6. HYDROLOGICAL INFORMATION OBTAINED FROM "GEOLOGICAL REPORT AND LEVEL 2 HYDROLOGICAL ASSESSMENT" DATED SEPTEMBER 2003, AND LEVEL 2 HYDROLOGICAL ASSESSMENT ADDENDUM DATED OCTOBER 2007 PREPARED BY JAGGER HIRS LIMITED. 7. THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENCE, CATEGORY 2. 8. HIGH MEASURED GROUNDWATER LEVELS VARY FROM 505 MASL TO 526 MASL ACROSS THE SITE.

Final Approved Plan

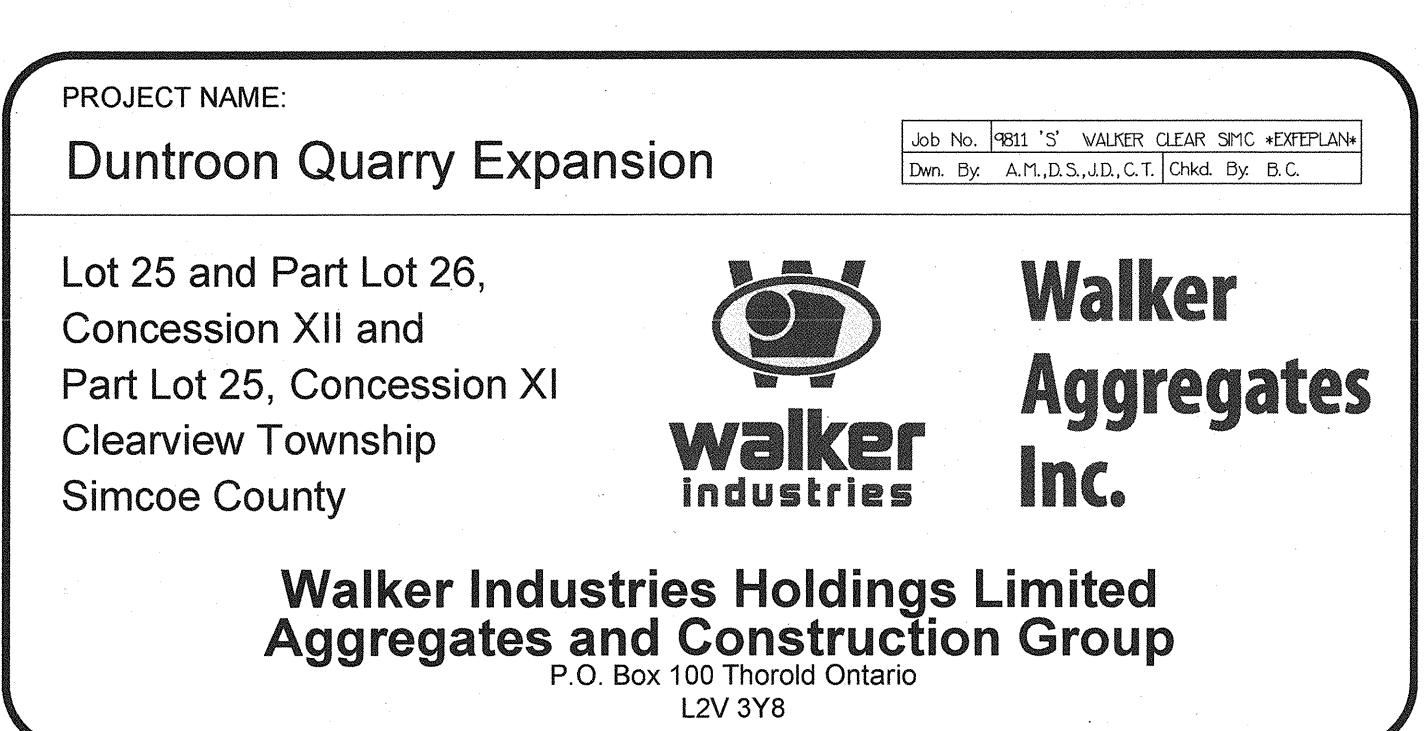
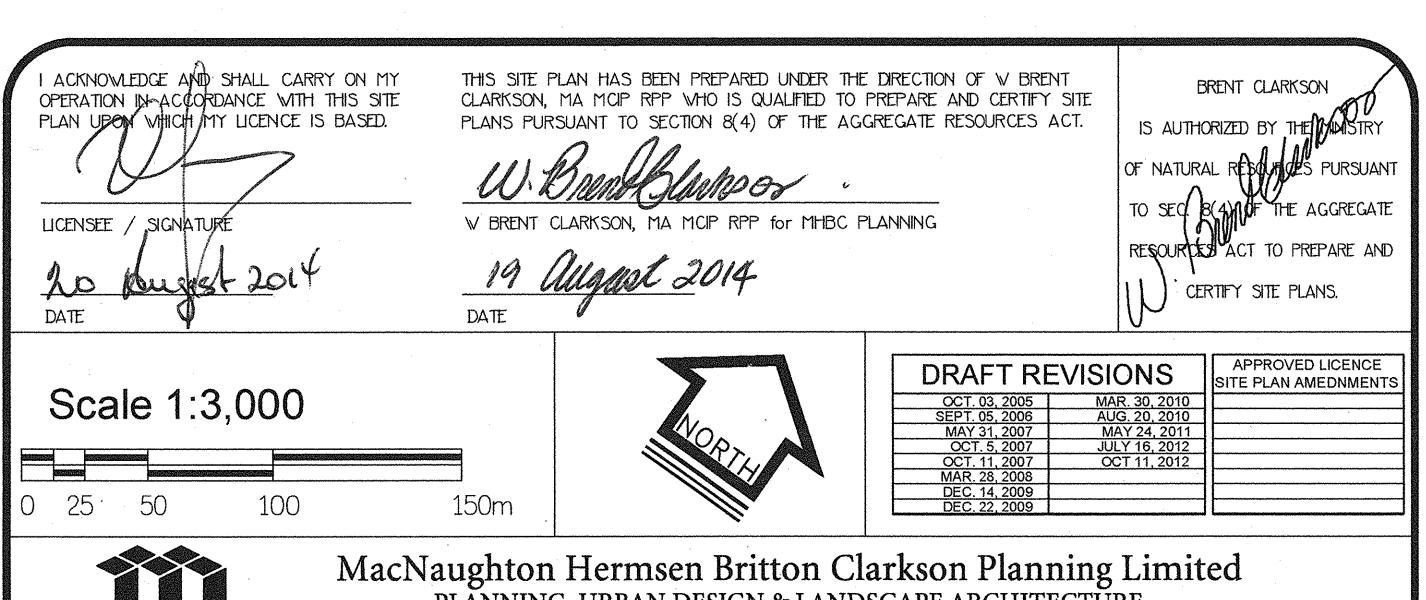
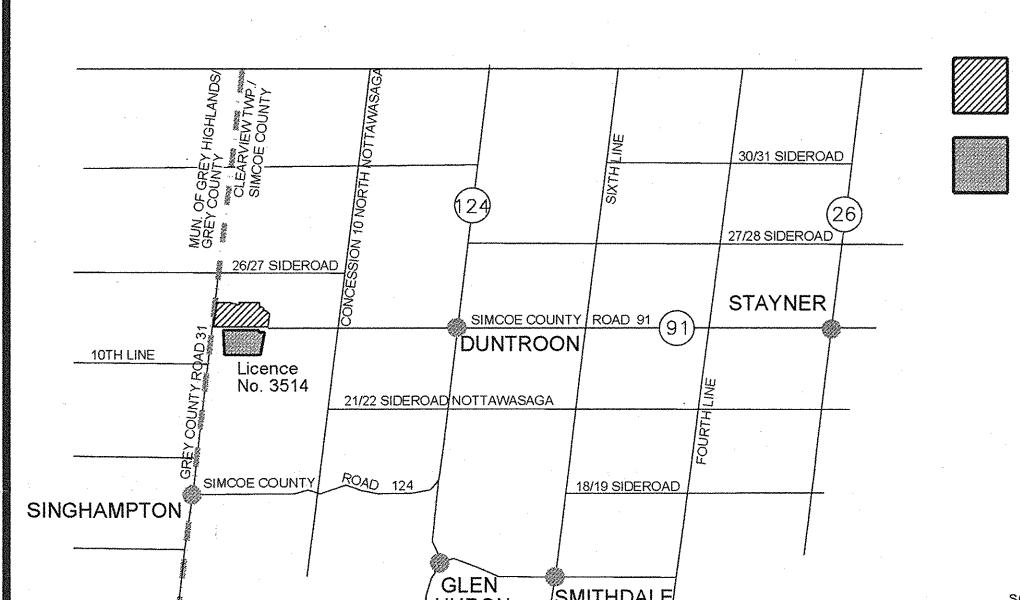
Date Sept 4, 2014

Signature

Ministry of Natural Resources

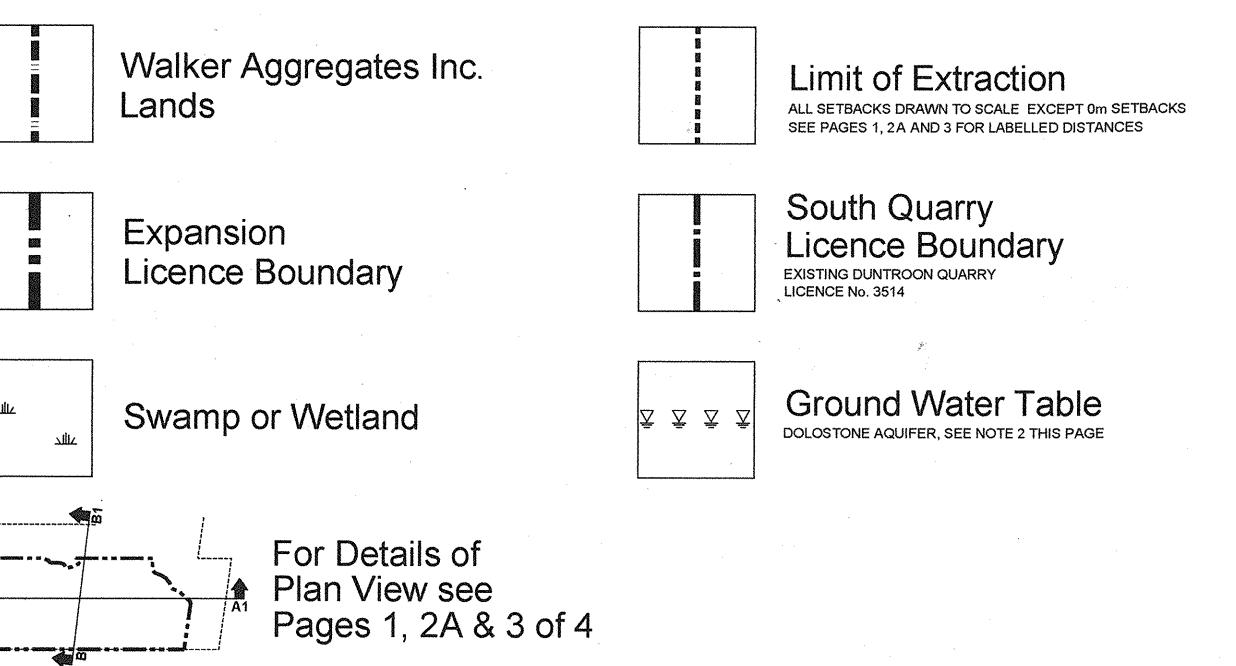
Midhurst District Office

Key Map



Cross Sections

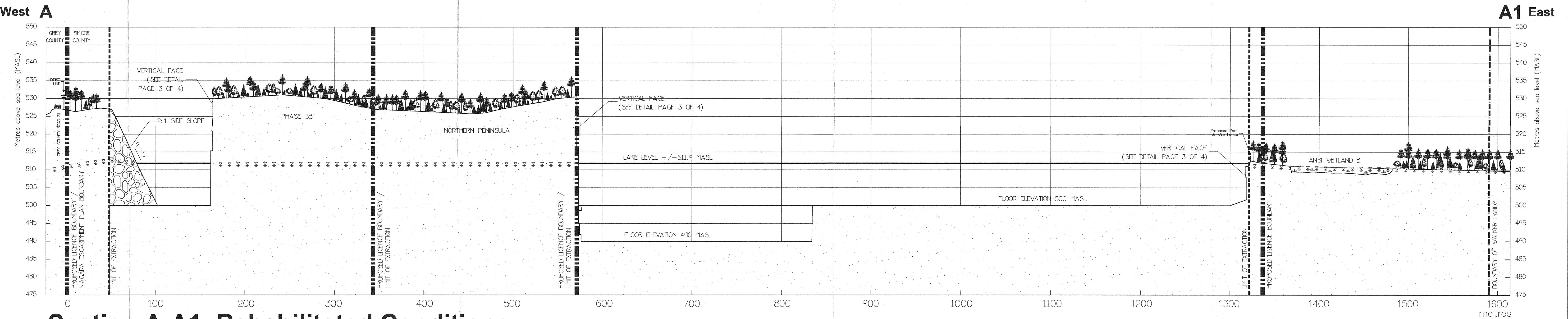
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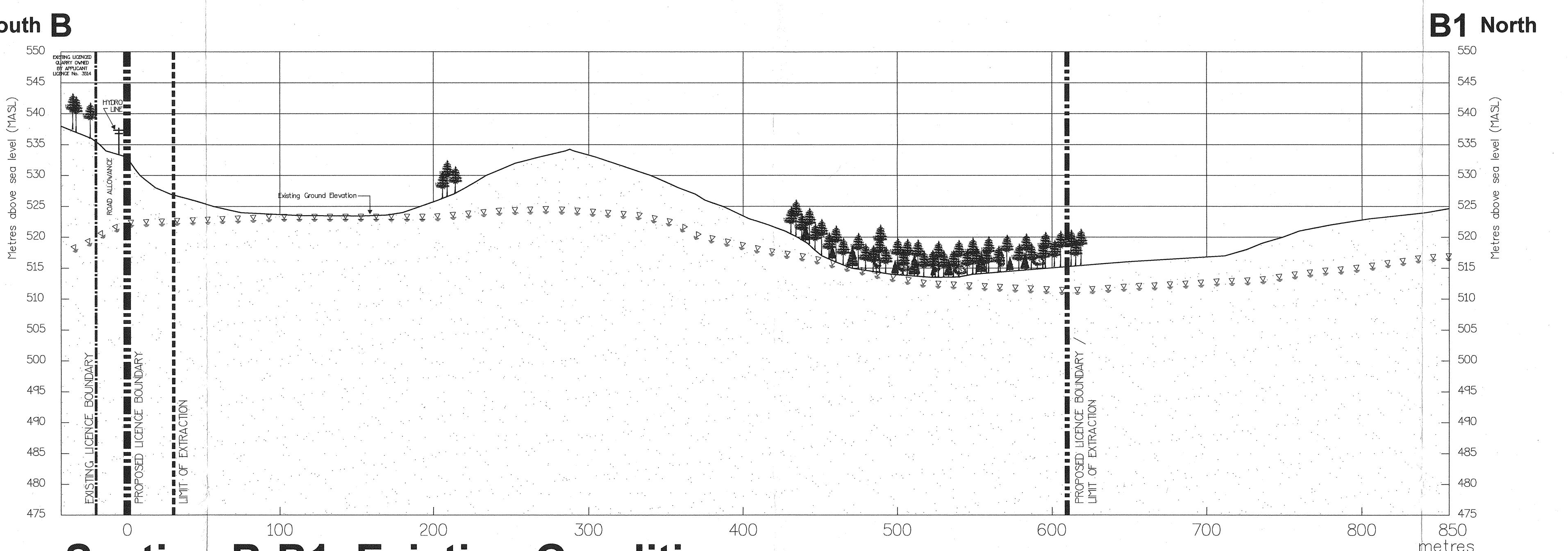
NOTES:

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2. HYDROGEOLOGICAL INFORMATION OBTAINED FROM "GEOLOGICAL REPORT AND LEVEL 2 HYDROGEOLOGICAL ASSESSMENT" DATED SEPTEMBER 2005 AND "LEVEL 2 HYDROGEOLOGICAL ASSESSMENT ADDENDUM" DATED OCTOBER 2007 PREPARED BY JAGGER HIMS LIMITED INDICATES THE GROUND WATER TABLE ACROSS THE LICENCED AREA VARIES SEASONALLY FROM ± 509 MASL TO ± 511 MASL IN THE TOPOGRAPHICALLY LOW AREAS, TO ± 518 MASL TO ± 526 MASL IN THE TOPOGRAPHICALLY HIGH AREAS.
3. CROSS SECTIONS PLOTTED FROM ABOVE REFERENCED TOPOGRAPHIC INFORMATION.
4. FOR PLAN VIEW OF CROSS SECTIONS, SEE "EXISTING FEATURES" PLAN, PAGE 1 OF 4 AND "REHABILITATION" PLAN, PAGE 3 OF 4.
5. SEE TYPICAL PLANTING BLOCK DETAIL (PAGE 3 OF 4) AND GENERAL NOTE 4 (PAGE 3 OF 4) FOR ADDITIONAL INFORMATION ON SLOPE TREATMENTS.
6. GROUNDWATER ELEVATIONS SHOWN ARE BASED ON ASSUMPTION THAT THE MAQ QUARRY (WEST OF GREY COUNTY ROAD 31) IS OPERATING AT THE SAME TIME AND IS REHABILITATED AT THE SAME TIME AS THIS LICENCE.

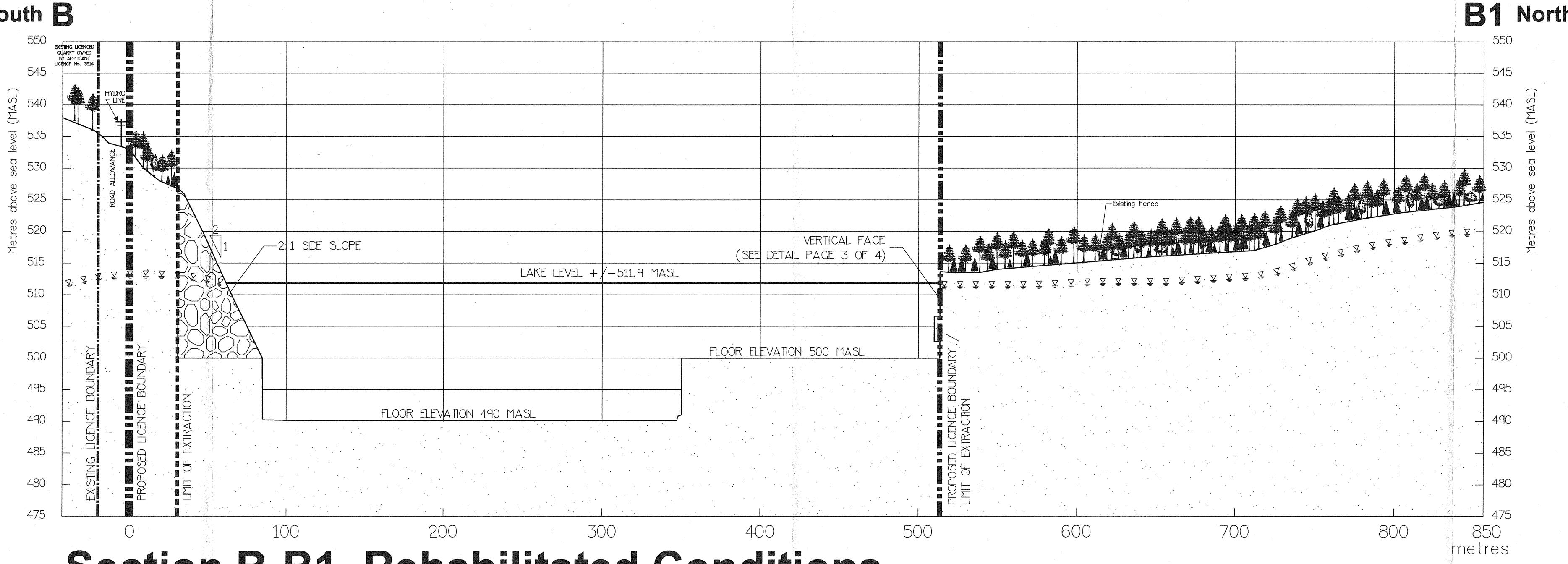
Section A-A1 Existing Conditions



Section A-A1 Rehabilitated Conditions



Section B-B1 Existing Conditions



Section B-B1 Rehabilitated Conditions

Final Approved Plan

Date: Sept. 4, 2014.

Signature: 

Ministry of Natural Resources
Midhurst District Office

| W ^{ITNESS} / SIGNATURE <i>W. Brent Clarkson</i> | THIS SITE PLAN HAS BEEN PREPARED UNDER THE DIRECTION OF W BRENT CLARKSON, MA MCIP RPP WHO IS QUALIFIED TO PREPARE AND CERTIFY SITE PLANS PURSUANT TO SECTION 8(4) OF THE AGGREGATE RESOURCES ACT. <i>W. Brent Clarkson</i> | BRENT CLARKSON IS AUTHORIZED BY THE MINISTRY OF NATURAL RESOURCES PURSUANT TO SECTION 8(4) OF THE AGGREGATE RESOURCES ACT TO PREPARE AND CERTIFY SITE PLANS. <i>W. Brent Clarkson</i> | | | | | | | | | | | | | | |
|--|---|---|-----------------|--|--------------|-----------------|----------------|---------------|---------------|----------------|----------------|---------------|---------------|--------------|----------------|---------------|
| August 2014 | W BRENT CLARKSON, MA MCIP RPP for MHBC PLANNING | | | | | | | | | | | | | | | |
| DATE | 19 August 2014 | | | | | | | | | | | | | | | |
| es ontal 1:2,000 cal 1:500 cal Exaggeration 4x s Otherwise Noted on Plan | | <table border="1"> <thead> <tr> <th colspan="2">DRAFT REVISIONS</th> </tr> </thead> <tbody> <tr> <td>MAY 24, 2011</td> <td>AUGUST 20, 2010</td> </tr> <tr> <td>MARCH 30, 2010</td> <td>DEC. 22, 2009</td> </tr> <tr> <td>DEC. 14, 2009</td> <td>MARCH 28, 2008</td> </tr> <tr> <td>MARCH 28, 2008</td> <td>OCT. 11, 2007</td> </tr> <tr> <td>OCT. 11, 2007</td> <td>OCT. 5, 2007</td> </tr> <tr> <td>SEPT. 25, 2012</td> <td>OCT. 03, 2005</td> </tr> </tbody> </table> | DRAFT REVISIONS | | MAY 24, 2011 | AUGUST 20, 2010 | MARCH 30, 2010 | DEC. 22, 2009 | DEC. 14, 2009 | MARCH 28, 2008 | MARCH 28, 2008 | OCT. 11, 2007 | OCT. 11, 2007 | OCT. 5, 2007 | SEPT. 25, 2012 | OCT. 03, 2005 |
| DRAFT REVISIONS | | | | | | | | | | | | | | | | |
| MAY 24, 2011 | AUGUST 20, 2010 | | | | | | | | | | | | | | | |
| MARCH 30, 2010 | DEC. 22, 2009 | | | | | | | | | | | | | | | |
| DEC. 14, 2009 | MARCH 28, 2008 | | | | | | | | | | | | | | | |
| MARCH 28, 2008 | OCT. 11, 2007 | | | | | | | | | | | | | | | |
| OCT. 11, 2007 | OCT. 5, 2007 | | | | | | | | | | | | | | | |
| SEPT. 25, 2012 | OCT. 03, 2005 | | | | | | | | | | | | | | | |
| | | APPROVED LICENCE SITE PLAN AMENDMENTS | | | | | | | | | | | | | | |

| | | | |
|---------------|---------------------------------------|-----------|------|
| PROJECT NAME: | Untroon Quarry Expansion | | |
| Job No. | 9811 'S' WALKER CLEAR SIMC *XSECPLAN* | | |
| Dwn. By: | A.M.,D.S.,J.D., C.T. | Chkd. By: | B.C. |

Lot 25 and Part Lot 26,
Concession XII and
Part Lot 25, Concession XI
Bearview Township
Lincoln County


walker
industries

Walker
Aggregates
Inc.

Walker Industries Holdings Limited
Aggregates and Construction Group
P.O. Box 100 Thorold Ontario
L2V 3Y8