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CII

Ministry of Northern Development, Mines, Natural Resources and Forestry

Integrated Aggregate Operations Section

Regional Operations Division
300 Water Street
Peterborough, ON K9J 3C7

E: ARAApprovals@ontario.ca

Ministère du Développement du Nord, des Mines, des Richesses naturelles et des Forêts

Section de la gestion intégrée des agrégats

Division des opérations régionales
300, rue Water
Peterborough (ON) K9J 3C7

E : ARAApprovals@ontario.ca

Ontario

February 22, 2022

St Mary’s Cement Inc.
55 Industrial Street
Toronto, ON M4G 3W9

Dear Mr. LeBreton

SUBJECT: Site Plan Amendment to Licence # 6538 under the Aggregate Resources Act
Lot 7, 8, 9 & 10 Concession 2, 3 & 4
Township of Brock, Regional Municipality of Durham

Further to your site plan amendment request of October 5, 2020, please be advised that the Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF) grants consent under Sec. 13 (3.1) of the *Aggregate Resources Act* to proceed with the following amendment:

- Relocation of a silt pond, to allow it to be placed in the central pit pond, located in area 4b of the site plan.

Attached is the revised site plan (3 of 4 pages) approved by the NDMNRF on February 22, 2022. The NDMNRF will forward a copy of these site plan pages to the agencies copied below. Please replace the previous versions with the attached.

Should you have any questions regarding this amendment please contact Sonya Zuber, Aggregate Specialist, at sonya.zuber@ontario.ca.

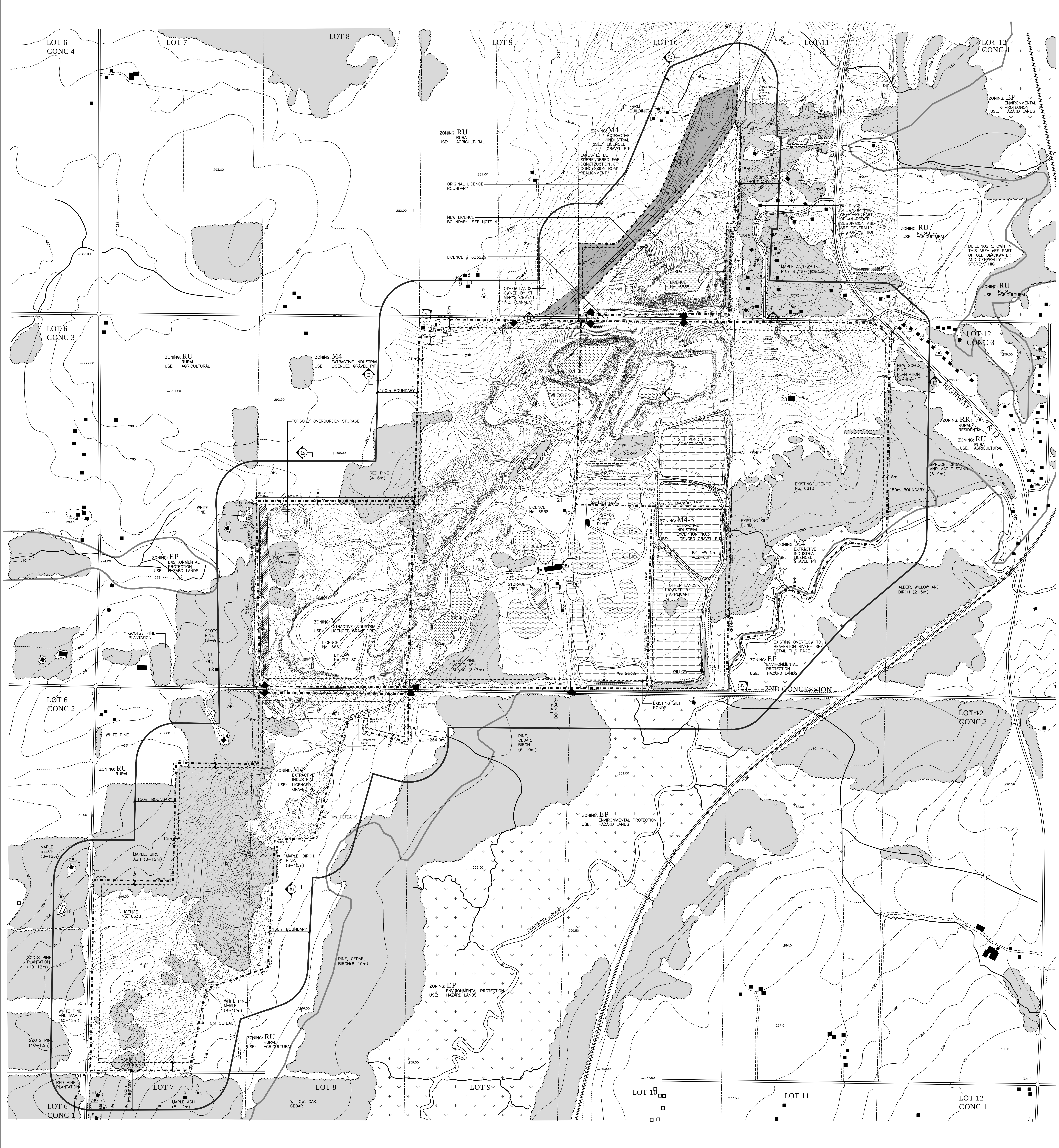
Sincerely,

Katie

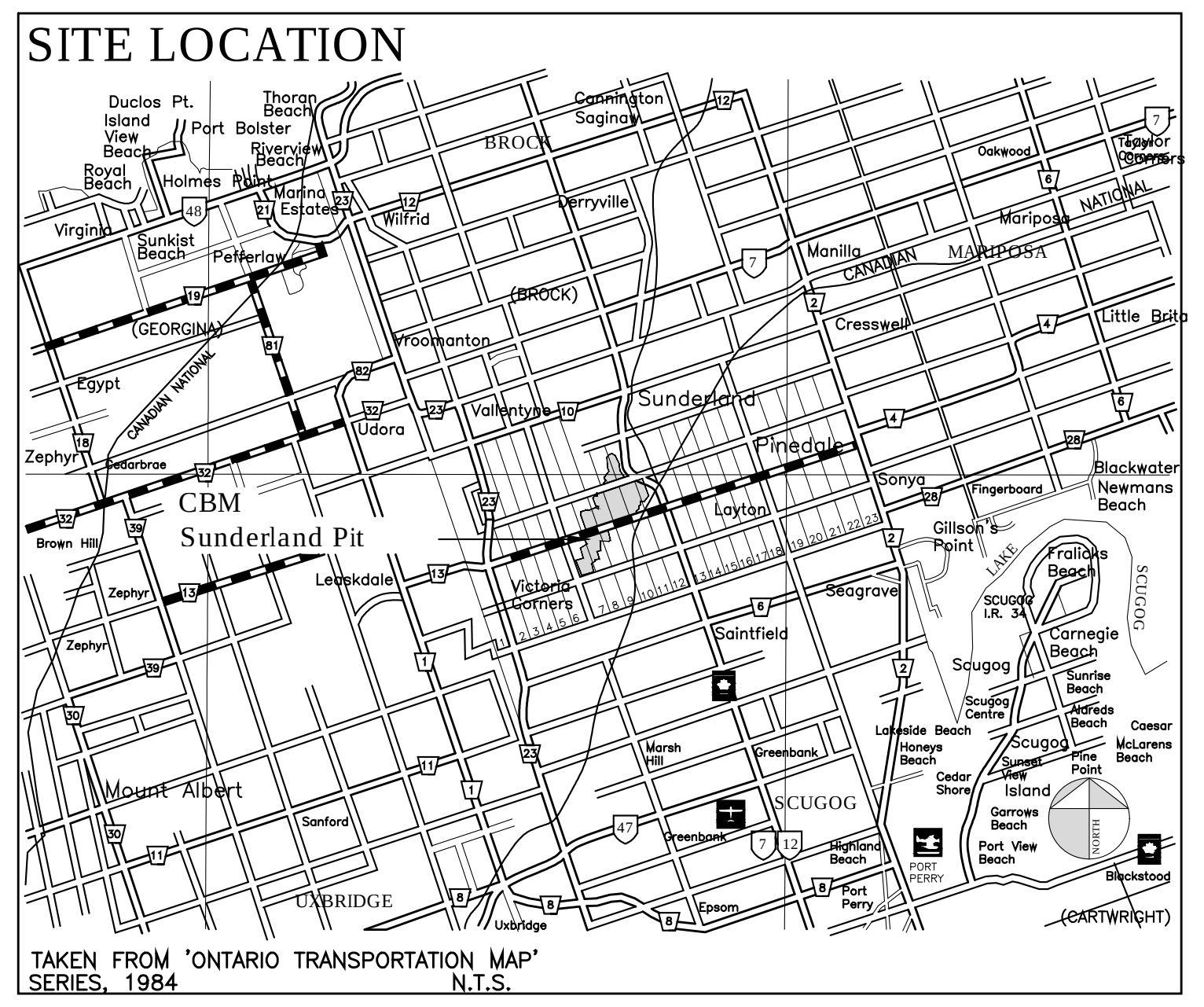
Katie O’Connell
Aggregate Resources Manager
Integrated Aggregate Operations Section

Attachment – Licence #6538 site plan (3 of 4 pages)

c. Clerk – Township of Brock
Clerk – Regional Municipality of Durham
NDMNRF – Aurora District



SITE LOCATION



TAKEN FROM 'ONTARIO TRANSPORTATION MAP' SERIES, 1984 N.T.S.

WATER WELL INFORMATION

KEY #	LOT #	WELL #	UTM EASTING NORTHING	ELEV metres	CASING DIAM (cm)	WATER FOUND metres	STAT LEVEL metres	TEST RATE G/P/MIN
A	7	46-5960	653080 4890125	297.18	12.70	259.69	265.79	10
B	7	19-6058	653400 4896300	297.18	15.24	290.17	290.47	10
C	10	46-62	654320 4898270	263.65	55.90	256.33	263.04	810
D	10	46-61	654249 4898428	263.65	15.24	256.33	254.51	N/A
E	9	46-60	654033 4898585	268.22	15.24	248.71	264.87	20
F	9	46-59	654106 4898643	268.22	15.24	247.19	262.12	20
G	11	19-6640	654400 4899000	274.32	12.70	250.24	262.12	10
H	10	46-63	654193 4899560	297.18	15.24	256.34	261.21	3
I	12	46-65	655039 4899897	265.18	15.24	247.81	261.52	10
J	11	46-6277	654403 4899819	281.94	15.24	219.76	251.46	6
K	11	19-6364	654400 4899900	274.32	15.24	252.07	258.78	5
L	11	46-6282	654384 4899912	278.89	15.24	259.08	259.08	10
M	11	19-4879	654350 4899950	280.42	12.70	248.11	258.17	12
N	11	19-6309	654300 4900100	281.94	15.24	258.47	268.22	15
O	11	19-5258	654300 4900250	281.94	15.24	246.89	270.36	30
P	9	46-80	653417 4899492	289.56	15.24	258.47	277.06	10
Q	9	46-58	653507 4899369	295.66	15.24	266.40	277.37	1
R	9	46-5946	653302 4899309	289.66	76.20	281.64	281.63	N/A
S	8	46-4266	652900 4898600	289.56	12.70	266.09	278.89	8
T	7	46-6312	653010 4887717	289.56	15.24	271.27	271.27	15
U	6	46-5517	652666 4896974	286.51	12.70	259.38	273.71	6
V	6	46-6382	652673 4896840	289.56	10.16	255.73	268.22	12
A1	7	46-4968	653150 4896010	288.95	10.16	238.66	267.61	25
B1	12	19-6092	655300 4899600	266.70	15.24	254.20	263.35	5
C1	12	46-66	655101 4899839	265.18	76.20	263.09	263.05	1
D1	11	19-5333	654700 4900100	281.94	15.24	259.99	270.97	30
E1	11	19-5331	654400 4900000	280.42	15.24	254.92	254.92	7
F1	11	46-6206	654414 4900065	274.32	12.70	244.49	257.25	10
G1	11	46-6237	654423 4898270	274.32	12.70	244.49	258.78	10
H1	11	19-5334	654400 4900200	274.32	15.24	240.18	260.60	20
I1	11	19-6021	654500 4900250	274.32	15.24	256.64	265.79	30
J1	11	19-4640	654400 4900550	266.70	15.24	238.35	258.47	10
K1	11	19-5379	654250 4900450	274.32	15.24	254.20	266.70	8
L1	7	46-5448	652910 4897861	289.56	15.24	256.64	274.32	20
M1	9							

BUILDING LIST

No.	HEIGHT	USE
1	1 STOREY	WOOD HOUSE
2	1 STOREY	BRICK HOUSE
3	1 STOREY	GARAGE
4	1 STOREY	BANK BARN (REMOVED)
5		WOOD SHED
6	2 STOREY	WOOD FRAME HOUSE
7	1 STOREY	FRAME BUILDING
8	1 STOREY	FRAME BUILDING
9		BARN
10		BARN
11	SPLIT LEVEL	BRICK HOUSE
12	1 STOREY	WOOD FRAME
13	1 STOREY	BRICK HOUSE
14	2 STOREY	FRAME HOUSE
15	1 STOREY	WOOD FRAME
16	2 STOREY	BRICK HOUSE
17	25mx6mx7m	MAINTENANCE SHOP
18	5mx4mx8m	OFFICE
19	5mx2mx25m	SCALE HOUSE
20	8mx5m	BARN (REMOVED)
21	7mx7mx3m	CONTROL TOWER
22	2mx10mx2m	STORAGE SHED
23	6mx12mx5.5m	BARN
24	3mx19m	QUALITY CONTROL LAB TRAILER- 1995
25	–	STORAGE TRAILER- 2000
26	–	STORAGE TRAILER- 2000
27	–	STORAGE TRAILER- 2000

EXISTING FEATURES NOTES (CONTINUED)

HYDROGEOLOGICAL INFORMATION

12. HYDROGEOLOGICAL INFORMATION FOR CONCESSION ROAD 4 PIT (PROPOSED LICENCE # 625229) INCLUDING GROUNDWATER ELEVATION WAS OBTAINED FROM REPORT BY GOLDER ASSOCIATES LTD., DATED DECEMBER 2010 AND EMAIL MEMO DATED APRIL 11, 2013.

    ELEVATION OF SURFACE WATER WITHIN THE SUNDERLAND PIT (LICENCE #6538, #6662 AND #6613) WERE OBTAINED FROM AIR PHOTO INTERPRETATION AND EXISTING WATER LEVELS ON SITE, AND VARY FROM ±268 IN THE NORTH TO ±265 IN THE SOUTH.

13. THE WATER TABLE ELEVATION WITHIN CONCESSION ROAD 4 PIT (PROPOSED LICENCE # 625229) IS ESTIMATED TO BE APPROXIMATELY ±265.0-268.5 ABOVE SEA LEVEL (A.S.L.) BASED ON THE HYDROGEOLOGICAL REPORT (SEE ABOVE).

14. LICENCE #6538 WILL REQUIRE GROUNDWATER MONITORING IN PREPARATION FOR EXTRACTION BELOW THE WATER TABLE. DETAILS OF THE MONITORING PROGRAM WILL BE FINALIZED IN CONSULTATION WITH THE MNRF AGGREGATE RESOURCES OFFICER.

15. WATER WELL RECORDS SUPPLIED BY M.O.E., OCT. 30, 1990. THERE ARE NO WATER WELLS WITHIN 300m OF THE NORTHERNMOST BOUNDARY OF LICENCE #6538, AND THERE ARE NO WATER WELLS WITHIN 300m OF THE SOUTHERNMOST BOUNDARY OF LICENCE #6538.

TECHNICAL REPORTS (FOR CONCESSION ROAD 4 PIT PROPOSED LICENCE # 625229)

16. HYDROGEOLOGICAL INFORMATION WAS OBTAINED FROM REPORT BY GOLDER ASSOCIATES LTD., DATED DECEMBER 2010 AND EMAIL MEMO DATED APRIL 11, 2013 (REFER TO DRAWING 2 OF 3 FOR TECHNICAL RECOMMENDATIONS).

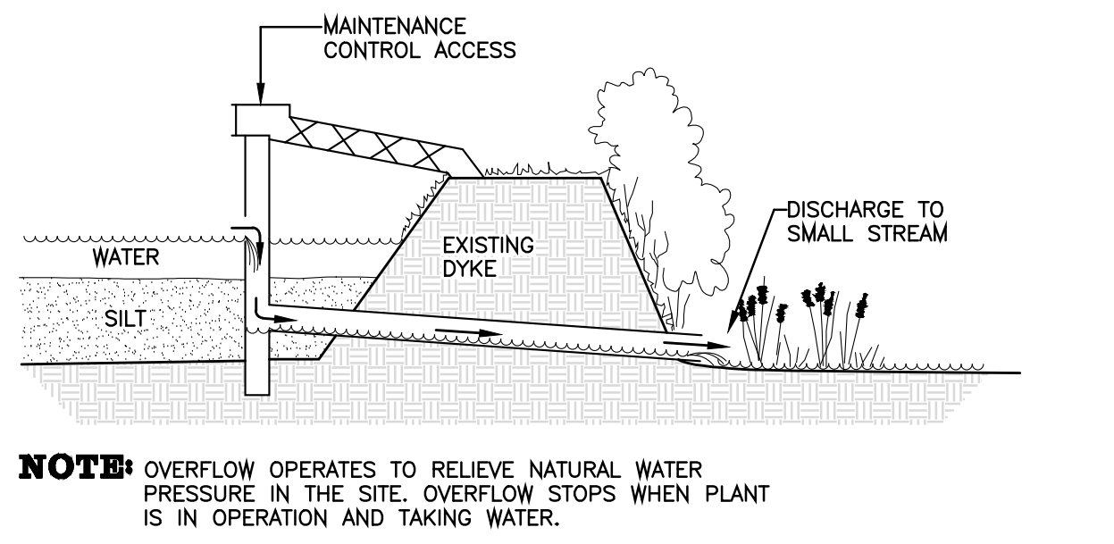
17. NATURAL ENVIRONMENT INFORMATION WAS OBTAINED FROM REPORT BY GOLDER ASSOCIATES LTD., DATED DECEMBER 2010 (REFER TO DRAWING 2 OF 4 FOR TECHNICAL RECOMMENDATIONS).

18. ARCHAEOLOGICAL INFORMATION WAS OBTAINED FROM REPORT BY GOLDER ASSOCIATES LTD., DATED DECEMBER 2010 (REFER TO DRAWING 2 OF 4 FOR TECHNICAL RECOMMENDATIONS).

19. ACOUSTICAL INFORMATION WAS OBTAINED FROM NOISE REPORT BY GOLDER ASSOCIATES LTD., DATED DECEMBER 2010 (REFER TO DRAWING 2 OF 4 FOR TECHNICAL RECOMMENDATIONS).

20. AIR QUALITY INFORMATION WAS OBTAINED FROM THE DUST REPORT BY GOLDER ASSOCIATES LTD., DATED APRIL 2011 (REFER TO DRAWING 2 OF 4 FOR TECHNICAL RECOMMENDATIONS).

SCHEMATIC OVERFLOW STRUCTURE



NOTE: OVERFLOW OPERATES TO RELIEVE NATURAL WATER PRESSURE IN THE SITE. OVERFLOW STOPS WHEN PLANT IS IN OPERATION AND TAKING WATER.

LEGEND

Symbol	Description
▬ ▪ ▬ ▪	BOUNDARY OF AREA TO BE LICENCED
•••••••	REGULATORY SETBACK LINE
▬▬▬	150m BOUNDARY
— - - —	CONCESSION/LOT LINE
▬▬▬	BOUNDARY OF ENVIRONMENTAL PROTECTION AREA
- - - -	OTHER LANDS OWNDED BY APPLICANT
~ · · ~	BOUNDARY OF BEAVERTON RIVER WETLAND (AS PER MNRF)
~~	SURFACE RUNOFF
— — 280.00 — —	EXISTING 5m CONTOUR LINE
— — 279.00 — —	EXISTING 1m CONTOUR LINE
+ 279.53	EXISTING SPOT ELEVATION
—·—·—	EXISTING FENCE
	EXISTING VEGETATION
	EXISTING POND
	EXISTING SILT POND
	EXISTING WETLAND
▨	EXISTING BERM
	EXISTING STOCKPILES
	EXISTING PIT FACE
	EXISTING ROADS ON SITE
1	EXISTING BUILDING AND NUMBER
BH#	BOREHOLE #02-09, 02-10 DRILLED BY JAGGER HIMS LIMITED OCTOBER 2002
	BOREHOLES AQ024, SQ008 AND SQ009 DRILLED BY APPLICANT
	MONITORING WELL TW7-01 DURHAM REGION 2007
	EXISTING PIT ENTRANCE/ EXIT
A	LOCATION OF SECTION LINES
A	EXISTING WATER WELL
RU Rural	ZONING

EXISTING FEATURES NOTES

GENERAL SITE PLAN INFORMATION

1. THIS SITE PLAN CONSISTS OF 4 DRAWINGS AND MUST BE READ COLLECTIVELY.

2. ALL MEASUREMENTS SHOWN ON THIS SITE PLAN ARE IN METRES.

3. IN OCTOBER OF 2003 THE SUNDERLAND PIT SITE PLANS (LICENCE #6538, #6662 AND #6613) WERE REPRODUCED IN DIGITAL FORM (AUTOCAD) TO IMPROVE CLARITY AND TO FACILITATE PROPOSED REVISIONS.

4. THE NORTHWEST AREA OF LICENCE # 6538 IS BEING SURRENDERED IN ORDER TO ALLOW CONSTRUCTION OF A PROPOSED BYPASS. THE NEW LICENCE BOUNDARY WILL BE DEMARCATED WITH POSTS 30m ON CENTRE WITH POSTS VISIBLE FROM ONE TO ANOTHER WHILE THE EXISTING PERIMETER FENCE IS MAINTAINED. THE NEW LICENCE BOUNDARY WILL BE FENCED PRIOR TO THE REMOVAL OF THE EXISTING FENCE OR THE OPENING OF THE NEW BYPASS ROAD.

LICENCE INFORMATION

5. THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENCE, CATEGORY 1.

6. APPLICANT:
   ST. MARYS CEMENT INC. (CANADA)
   55 INDUSTRIAL STREET
   TORONTO, ONTARIO
   M4G 3W9
   (416) 423-1300

7. THESE PLANS GOVERN THE FOLLOWING LICENCES:
   LICENCE # 625229 (CONCESSION ROAD 4 PIT)
   TOTAL AREA TO BE LICENCED: 1.33 HA
   TOTAL AREA TO BE EXTRACTED: 1.18 HA
   TOTAL AREA TO REHABILITATED: 1.18 HA

   LICENCE #6538:
   TOTAL AREA = 203 HA
   DISTURBED AREA = ±77.5 HA
   TOTAL AREA TO BE EXTRACTED = ±180.2 HA

   LICENCE #6662:
   TOTAL AREA = 40.5 HA
   DISTURBED AREA = ±23.1 HA
   TOTAL AREA TO BE EXTRACTED = ±29.6 HA

   LICENCE #6613:
   TOTAL AREA = 100 HA
   DISTURBED AREA = 34.1 HA
   TOTAL AREA TO BE EXTRACTED = 47.0 HA

   TOTAL ALL LICENSES:
   LICENSED AREA = ±345 HA
   AREA TO BE EXTRACTED = ±258.4 HA
   TOTAL EXISTING DISTURBED AREA = ±101 HA

   THE EAST HALF OF LICENCE #6613 IS LEASED LAND. ALL OTHER LANDS SHOWN ARE OWNED BY THE APPLICANT.

8. THE COMMON SETBACKS BETWEEN LICENCES #6538, #6662 AND #6613 HAVE BEEN OMITTED.

BASE INFORMATION

9. TOPOGRAPHICAL INFORMATION FOR SUNDERLAND PIT LICENCE #6538, #6662 AND #6613 WAS TAKEN FROM 'ONTARIO BASE MAPS' AT 1:10,000, MNR 1988; NORTHWAY MAP TECHNOLOGY LIMITED AT 1:2000, 1986; AND McELHANNEY MAPPING SERVICES AT 1:2000 DATED NOV. 4, 1989. TOPOGRAPHIC INFORMATION FOR CONCESSION ROAD 4 PIT (PROPOSED LICENCE # 625229) WAS OBTAINED FROM FIRST BASE SOLUTIONS INC., DATED MAY 2003. ALL ELEVATIONS ARE GEODETIC AND ABOVE SEA LEVEL (ASL).

   BOUNDARY INFORMATION TAKEN FROM HANCOCK SAND AND GRAVEL LIMITED SITE PLANS, APRIL, 1972, 1974, 1976, AND SCHEDULE 'A' LAND DEED DATED DECEMBER 31, 1981.

   CONCESSION ROAD 4 PIT WAS FIELD CHECKED BY HARRINGTON McAVAN LTD., IN JULY 2010. THE SUNDERLAND PIT SITE IS CURRENTLY FENCED WITH A 1.2m HIGH POST AND WIRE FENCE WITH METAL 1.2m HIGH GATES, WITH THE EXCEPTION OF THOSE AREAS COVERED BY SITE PLAN OVERRIDES SHOWN ON DRAWING 2 OF 4.

10. ZONING INFORMATION FOR SUNDERLAND PIT LICENCE #6538, #6662 AND #6613 WAS TAKEN FROM THE CORPORATION OF THE TOWNSHIP OF BROCK, ZONING BY-LAW NUMBER 287-78=PL, AS AMENDED TO FEBRUARY, 1985 PLATE A2. ZONING INFORMATION FOR CONCESSION ROAD 4 PIT WAS OBTAINED FROM SCHEDULE A2, TOWNSHIP OF BROCK, KEY MAP NO. 80, DATED FEBRUARY 2005. THE TOWNSHIP HAS CONFIRMED THAT THE SITE IS ZONING EXTRACTIVE INDUSTRIAL.

Ministry of Natural Resources
and Forestry
APPROVED
Under the *Aggregate Resources Act*

meghanGemi
Aggregate Technical Specialist
Date: October 22, 2020

NO.	DATE	REVISIONS	OWNER	HM	MNR
5.	MAY14 2015	AS PER MNRF COMMENTS			
4.	MAR27 1995	AS PER MNR COMMENTS			
3.	JAN18 1995	AS PER MNR COMMENTS			
2.	NOV23 1993	AS PER MNR COMMENTS			
1.	JULY8 1991	TO INCLUDE LICENCE #740827 (6613)			

Pre Licence Review

NO.	DATE	REVISIONS	OWNER	HM	MNR
2.	OCT 2020	REVISED TO SHOW 0m SETBACK ALONG EAST SIDE OF LICENCE BOUNDARY SOUTH OF 2ND CONCESSION		✓	MG
		REVISE BELOW WATER EXTRACTION AREAS, REVISE PHASING, ADDITION OF SOME PORTABLE STRUCTURES, AMALGAMATING THE OPERATION OF ALL LICENCES, AND THE SURRENDER OF THE LICENSED LANDS REQUIRED TO BUILD THE 4TH TO 5TH LINE BY-PASS, AND INCORPORATING PREVIOUS APPROVED AMENDMENTS.			

Site Plan Amendments

Harrington McAvan Ltd
41 Main Street, Unit 102
Unionville, Ontario L3R 2E5
Tel: 905-294-8282 Fax: 905-294-7623
www.harringtonmcavan.com

Project Name

ST MARYS
St. Marys Cement Inc. (Canada)
55 Industrial Street
Toronto, Ontario
M4G 3W9
(416) 423-1300

SUNDERLAND PIT

LICENCE 6538 LOTS 7, 8, 9 & 10; CONCESSION 2, 3 & 4
LICENCE 6613 LOTS 10 & 11; CONCESSION 3
LICENCE 6662 LOTS 8; CONCESSION 3
LICENCE NO 625229 CLOSED ROAD ALLOWANCE BETWEEN PART LOT 10; CONCESSION 3 AND PART LOT 10; CONCESSION 4,
TOWNSHIP OF BROCK
REGIONAL MUNICIPALITY OF DURHAM

Scale 1:5000
0 50 100 150 200m

North

Stamp
ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS
RICHARD McAVAN
MEMBER

Drawing Status
SUBMITTED FOR
REVIEW & APPROVAL

Drawn S.J.P.
Checked G.D.H.
Issue Date OCT 2020

Drawing Title
EXISTING
FEATURES
PLAN

Project Number
88-02

Drawing Number
1 OF 4

FILE NAME: 8802/COMBINEDSITEPLANS/8802-1.DWG
PLOT DATE: OCTOBER 8, 2020

PHASE A
PHASE A NOTES SCALE 1:5000

1. ALL OVERBURDEN AND UNMARKETABLE LOCATED IN THE SOUTH PART OF AREA 1 SHALL BE MOVED AND USED TO CREATE A 3:1 SIDE SLOPE ALONG THE SOUTH LICENCE BOUNDARY.
2. PRIOR TO BELOW WATER EXTRACTION, THE LOCATION FOR THE REQUIRED 3:1 (HORIZONTAL:VERTICAL) SLOPES IN THE SOUTHERN HALF OF AREA 1b WILL BE SURVEYED AND STAKED.
3. MAXIMUM DEPTH OF THE PONDS IN AREAS 1 AND 4 IS 240m.a.s.l.. MAXIMUM DEPTH OF EXTRACTION NORTH OF LICENCE 625229 IS 254m.a.s.l.. MAXIMUM DEPTH OF EXTRACTION IN LICENCE 625229 IS 250m.a.s.l..
4. EXTRACTION OF BELOW WATER IN AREA 1b WILL NOT BE EXPANDED (VERTICALLY OR HORIZONTALLY) BEYOND WHAT IS SHOWN ATTACHED .
5. REHABILITATION OF THE EASTERN AND WESTERN 3:1 SLOPES, ADJACENT TO THE POND IN AREA 1b, WILL BE STABILIZED AND SEEDED BY OCTOBER 31, 2015.
6. SEQUENTIAL BACKFILLING OF WEST SIDE SLOPE AND BELOW WATER EXTRACTION IN AREA 1b SHALL CONTINUE IN A NORTHERLY DIRECTION.
7. COMPLETE ABOVE WATER EXTRACTION IN AREA 1a, IN A NORTHWESTERLY DIRECTION, AS SHOWN.
8. BEGIN FINAL REHABILITATION OF SIDE SLOPES & PIT FLOOR OF AREA 1a (HAUL ROAD TO REMAIN).
9. STAKE THE WESTERN SHORELINE (LIMIT OF EXTRACTION) IN AREA 4a & b. STAKES TO BE MAINTAINED.
10. CONTINUE BELOW WATER EXTRACTION IN AREA 4a AND 4b IN A WESTERLY DIRECTION & ABOVE AND BELOW WATER EXTRACTION IN AREA 1b. NOTE: A MINIMUM 30m CAUSEWAY WILL BE LEFT BETWEEN 4a & 4b TO SUPPORT THE EXISTING HAUL ROAD.
11. BEGIN REHABILITATION OF THE WESTERN SHORELINE OF AREAS 4a WHEN EXTRACTION REACHES THE LIMIT AS STAKED. SHORELINE IN ACCORDANCE WITH DETAIL 1/4 ON SHEET 4.
12. PRIOR TO PHASE C EXTRACTION OF THE EASTERN EXPANSION OF EXISTING PONDS IN AREA 4 WILL ONLY OCCUR IF MATERIAL IS REQUIRED FOR BLENDING TO OPTIMIZE THE USE OF THE RESERVES.
13. MAINTAIN ALL VEGETATION IN A HEALTHY VIGOROUS GROWING CONDITION.
14. COMPLETE EXTRACTION OF AREA 2.
15. COMPLETE EXTRACTION OF AREA 1b ABOVE & BELOW WATER.

PHASE B
PHASE B NOTES

1. EXTRACTION IN AREA 1 & 2 MUST BE COMPLETED BEFORE EXTRACTION IN THE CONCESSION ROAD 4 LICENCE BEGINS.
2. NO EXTRACTION IN THE SETBACK AREAS NORTH OR SOUTH OF LICENCE 625229 OR IN ANY PART OF LICENCE 625229 WILL OCCUR PRIOR TO THE CLOSING OF THE ROAD AT BOTH THE EAST AND THE WEST END (THE EXISTING ENTRANCE/ LANE WAY AT THE WEST END ON THE NORTH SIDE OF CONCESSION ROAD 4 SHALL BE MAINTAINED). REFLECTIVE SIGNS SHALL BE POSTED AT EITHER END OF THE CLOSED ROAD, NOTIFYING MOTORISTS OF THE ROAD CLOSURE IN ACCORDANCE WITH MUNICIPAL REQUIREMENTS. PRIOR TO EXTRACTION COMMENCING IN AREA 3a OR IN THE SETBACK AREAS NORTH OR SOUTH OF LICENCE 625229, CONSTRUCTION AND/OR INSTALLATION OF THE REQUIRED 1.2m FENCING ON THE WEST AND EAST BOUNDARIES OF LICENCE 625229 SHALL BE COMPLETE AND TIE IN WITH THE EXISTING FENCING ON THE ADJACENT LICENSES, TO THE STANDARDS OF THE AGGREGATE RESOURCES ACT, AS REQUIRED (SEE SITE PLAN OVERRIDE). ALL FENCING SHALL BE MAINTAINED.
3. BEGIN ABOVE WATER EXTRACTION IN AREA 3a, IN DIRECTION SHOWN.
4. PREPARE SITE WITHIN AREA 3a BY REMOVING EXISTING ROAD AND SCRUB VEGETATION IN THE AREA TO BE EXTRACTED. SALVAGE LARGER STUMPS AND TREES FOR HABITAT CREATION DURING PROGRESSIVE REHABILITATION.
5. BEGIN STRIPPING TOPSOIL AND OVERBURDEN SEPARATELY FROM THE WEST END OF AREA 3a AND USE THE MATERIAL TO CONSTRUCT A TEMPORARY STORAGE BERM THAT IS MINIMUM 80m AND MAXIMUM 300m IN LENGTH ADJACENT WESTERN LICENCE BOUNDARIES AND ACOUSTICAL BARRIER ADJACENT TO THE EASTERN LICENCE BOUNDARY OF THE NORTH PIT (ACOUSTICAL BERM CONSTRUCTION MUST BE COMPLETED BEFORE THE FIRST DRY LIFT AND BEFORE EXTRACTION IS WITHIN 140m OF EASTERN SETBACK). THE REMAINING MATERIAL WILL BE TRANSPORTED INTO THE ADJACENT LICENCE (LICENCE No. 6538) AND USED TO REHABILITATE THE PIT FLOOR AND SIDESLOPES. STRIPPING WILL INCLUDE REMOVAL OF THE NORTH AND SOUTH REHABILITATED SIDESLOPE OF THE ADJACENT LICENCES. SEE DETAIL THIS SHEET.
6. BEGIN ABOVE WATER EXTRACTION IN AREA 3a IN DIRECTION SHOWN. TEMPORARY STOCKPILES MAY FOLLOW THE EXCAVATION FACE. AGGREGATE WILL BE TRANSPORTED SOUTH TO THE EXISTING SUNDERLAND PIT (LICENCE No. 6538) FOR PROCESSING AND SHIPPING.

PHASE C
PHASE C NOTES

1. CONTINUE EXTRACTION OF EAST PART OF AREA 4.
2. COMPLETE FINAL REHABILITATION OF THE WESTERN SHORELINE OF AREA 4a AND BEGIN ENHANCEMENT AS SHOWN IN DETAIL 1/4 ON SHEET 4.
3. COMPLETE FINAL REHABILITATION OF AREAS 1a & 2

PHASE D
PHASE D NOTES

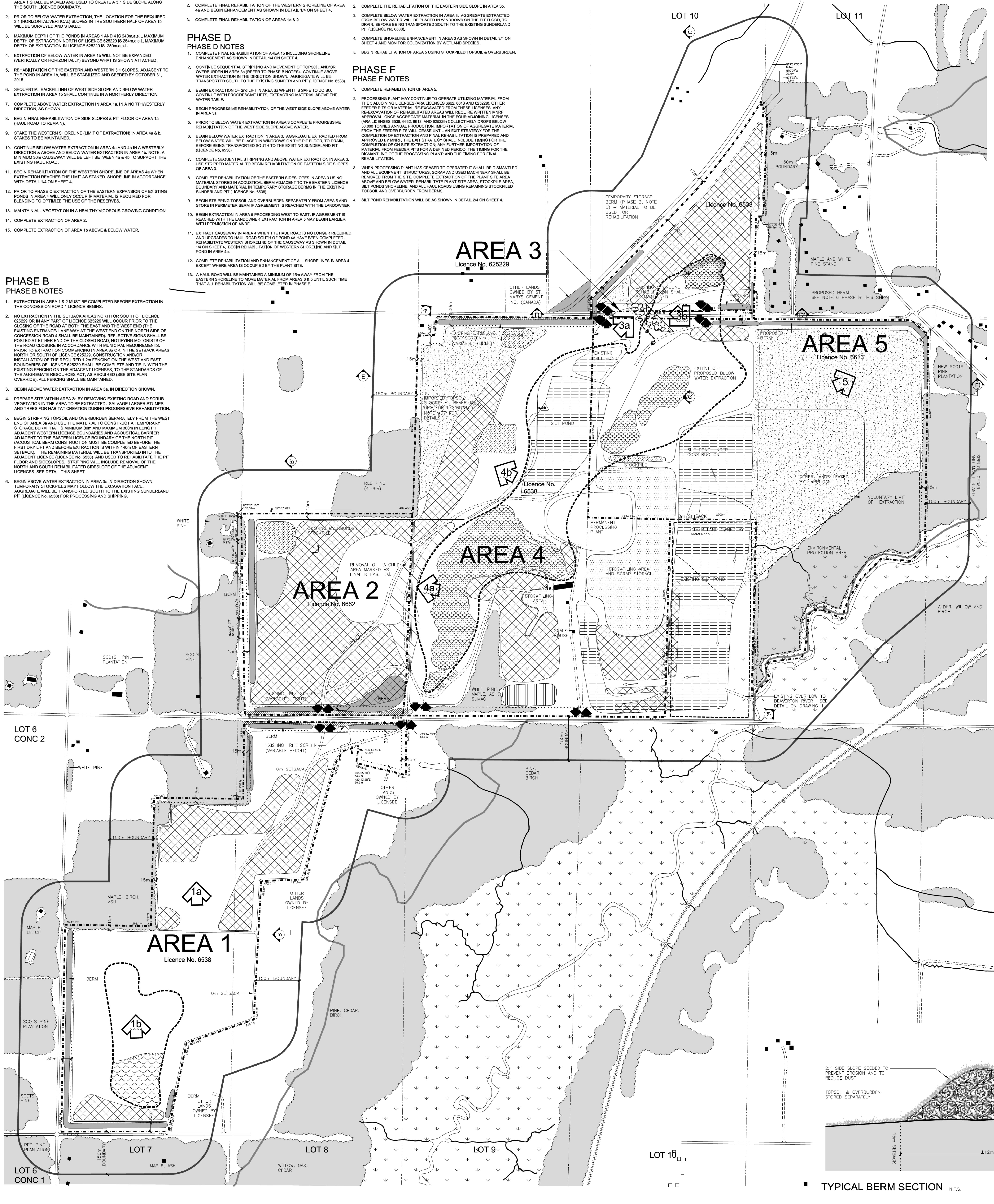
1. COMPLETE FINAL REHABILITATION OF AREA 1b INCLUDING SHORELINE ENHANCEMENT AS SHOWN IN DETAIL 1/4 ON SHEET 4.
2. CONTINUE SEQUENTIAL STRIPPING AND MOVEMENT OF TOPSOIL AND/OR OVERBURDEN IN AREA 3a (REFER TO PHASE B NOTES). CONTINUE ABOVE WATER EXTRACTION IN THE DIRECTION SHOWN. AGGREGATE WILL BE TRANSPORTED SOUTH TO THE EXISTING SUNDERLAND PIT (LICENCE No. 6538).
3. BEGIN EXTRACTION OF 2nd LIFT IN AREA 3a WHEN IT IS SAFE TO DO SO. CONTINUE WITH PROGRESSIVE LIFTS, EXTRACTING MATERIAL ABOVE THE WATER TABLE.
4. BEGIN PROGRESSIVE REHABILITATION OF THE WEST SIDE SLOPE ABOVE WATER IN AREA 3a.
5. PRIOR TO BELOW WATER EXTRACTION IN AREA 3 COMPLETE PROGRESSIVE REHABILITATION OF THE WEST SIDE SLOPE ABOVE WATER.
6. BEGIN BELOW WATER EXTRACTION IN AREA 3. AGGREGATE EXTRACTED FROM BELOW WATER WILL BE PLACED IN WINDROWS ON THE PIT FLOOR, TO DRAIN, BEFORE BEING TRANSPORTED SOUTH TO THE EXISTING SUNDERLAND PIT (LICENCE No. 6538).
7. COMPLETE SEQUENTIAL STRIPPING AND ABOVE WATER EXTRACTION IN AREA 3. USE STRIPPED MATERIAL TO BEGIN REHABILITATION OF EASTERN SIDE SLOPES OF AREA 3.
8. COMPLETE REHABILITATION OF THE EASTERN SIDESLOPES IN AREA 3 USING MATERIAL STORED IN ACOUSTICAL BERM ADJACENT TO THE EASTERN LICENCE BOUNDARY AND MATERIAL IN TEMPORARY STORAGE BERMS IN THE EXISTING SUNDERLAND PIT (LICENCE No. 6538).
9. BEGIN STRIPPING TOPSOIL AND OVERBURDEN SEPARATELY FROM AREA 5 AND STORE IN PERIMETER BERM IF AGREEMENT IS REACHED WITH THE LANDOWNER.
10. BEGIN EXTRACTION IN AREA 5 PROCEEDING WEST TO EAST. IF AGREEMENT IS REACHED WITH THE LANDOWNER EXTRACTION IN AREA 5 MAY BEGIN EARLIER WITH PERMISSION OF MNRF.
11. EXTRACT CAUSEWAY IN AREA 4 WHEN THE HAUL ROAD IS NO LONGER REQUIRED AND UPGRADES TO HAUL ROAD SOUTH OF POND 4A HAVE BEEN COMPLETED. REHABILITATE WESTERN SHORELINE OF THE CAUSEWAY AS SHOWN IN DETAIL 1/4 ON SHEET 4. BEGIN REHABILITATION OF WESTERN SHORELINE AND SILT POND IN AREA 4b.
12. COMPLETE REHABILITATION AND ENHANCEMENT OF ALL SHORELINES IN AREA 4 EXCEPT WHERE AREA IS OCCUPIED BY THE PLANT SITE.
13. A HAUL ROAD WILL BE MAINTAINED A MINIMUM OF 15m AWAY FROM THE EASTERN SHORELINE TO MOVE MATERIAL FROM AREAS 3 & 5 UNTIL SUCH TIME THAT ALL REHABILITATION WILL BE COMPLETED IN PHASE F.

PHASE E
PHASE E NOTES

1. COMPLETE ABOVE WATER EXTRACTION IN AREA 5.
2. COMPLETE THE REHABILITATION OF THE EASTERN SIDE SLOPE IN AREA 3b.
3. COMPLETE BELOW WATER EXTRACTION IN AREA 3. AGGREGATE EXTRACTED FROM BELOW WATER WILL BE PLACED IN WINDROWS ON THE PIT FLOOR, TO DRAIN, BEFORE BEING TRANSPORTED SOUTH TO THE EXISTING SUNDERLAND PIT (LICENCE No. 6538).
4. COMPLETE SHORELINE ENHANCEMENT IN AREA 3 AS SHOWN IN DETAIL 3/4 ON SHEET 4 AND MONITOR COLONIZATION BY WETLAND SPECIES.
5. BEGIN REHABILITATION OF AREA 5 USING STOCKPILED TOPSOIL & OVERBURDEN.

PHASE F
PHASE F NOTES

1. COMPLETE REHABILITATION OF AREA 5.
2. PROCESSING PLANT MAY CONTINUE TO OPERATE UTILIZING MATERIAL FROM THE 3 ADJOINING LICENSES (ARA LICENSES 6662, 6613 AND 625229), OTHER FEEDER PITS OR MATERIAL RE-EXCAVATED FROM THESE LICENSES. ANY RE-EXCAVATION OF REHABILITATED AREAS WILL REQUIRE WRITTEN MNRF APPROVAL. ONCE AGGREGATE MATERIAL IN THE FOUR ADJOINING LICENSES (ARA LICENSES 6538, 6662, 6613, AND 625229) COLLECTIVELY DROPS BELOW 50,000 TONNES ANNUAL PRODUCTION, IMPORTATION OF AGGREGATE MATERIAL FROM THE FEEDER PITS WILL CEASE UNTIL AN EXIT STRATEGY FOR THE COMPLETION OF EXTRACTION AND FINAL REHABILITATION IS PREPARED AND APPROVED BY MNRF. THE EXIT STRATEGY SHALL INCLUDE TIMING FOR THE COMPLETION OF ON SITE EXTRACTION; ANY FURTHER IMPORTATION OF MATERIAL FROM FEEDER PITS FOR A DEFINED PERIOD; THE TIMING FOR THE DISMANTLING OF THE PROCESSING PLANT; AND THE TIMING FOR FINAL REHABILITATION.
3. WHEN PROCESSING PLANT HAS CEASED TO OPERATED IT SHALL BE DISMANTLED AND ALL EQUIPMENT, STRUCTURES, SCRAP AND USED MACHINERY SHALL BE REMOVED FROM THE SITE. COMPLETE EXTRACTION OF THE PLANT SITE AREA ABOVE AND BELOW WATER. REHABILITATE PLANT SITE AREA, STOCKPILE AREA, SILT PONDS SHORELINE, AND ALL HAUL ROADS USING REMAINING STOCKPILED TOPSOIL AND OVERBURDEN FROM BERMS.
4. SILT POND REHABILITATION WILL BE AS SHOWN IN DETAIL 2/4 ON SHEET 4.



TYPICAL BERM SECTION N.T.S.

NOTE: THE BERM ON THE EAST PROPERTY LINE NORTH OF THE 4TH LINE MAY BE CONSTRUCTED AS AN ACOUSTICAL BARRIER IN CONSULTATION WITH THE ADJACENT RESIDENTS AND MNRF.

OPERATIONAL NOTES LICENCE #6538, #6613, #6662 AND # 625229

GENERAL INFORMATION

1. THIS PLAN DEPICTS A SCHEMATIC OPERATIONS AND REHABILITATION SEQUENCE FOR THIS PROPERTY BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION. THE PHASES DO NOT REPRESENT ANY SPECIFIC OR EQUAL TIME PERIOD. ANY MAJOR CHANGES TO THE OPERATIONAL PHASING WILL REQUIRE PRIOR WRITTEN APPROVAL OF MNRF.
2. IN OCTOBER 2003 THE SUNDERLAND PIT SITE PLANS (LICENCE #6538, #6662 AND #6613) WERE REPRODUCED IN DIGITAL FORM (AUTOCAD) TO IMPROVE CLARITY AND FACILITATE PROPOSED REVISIONS. WHEN ADDITIONAL OR MORE CURRENT INFORMATION IS AVAILABLE THE PLANS HAVE BEEN UPDATED TO IMPROVE ACCURACY.
3. SITE PLAN OVERRIDES ARE LISTED IN THE SITE PLAN OVERRIDE TABLE SHOWN ON THIS PAGE.
4. REFER TO DRAWING 1, EXISTING FEATURES PLAN, FOR A DESCRIPTION OF EXISTING VEGETATION AND BUILDINGS WITHIN THE 150 METRE BOUNDARY AND ON SITE.
5. TOTAL AREA TO BE EXTRACTED IS:
   LICENCE #6538: ±180.2 HA
   LICENCE #6662: ±29.6 HA
   LICENCE #6613: ±45.4 HA
   LICENCE # 625229: 1.18 HA
6. THE REHABILITATED AREA WILL BE MAXIMIZED AND DISTURBED AREA MINIMIZED ON AN ONGOING BASIS DURING THE LIFE-CYCLE OF THE OPERATION (REFER TO GREENBELT PLAN POLICY 4.3.2 NOTE #4a). DUE TO THE OVERALL DEPTH AND VARIABILITY OF THE DEPOSIT, THE 'MAXIMUM ALLOWABLE DISTURBED AREA' FOR LICENCE No. 6613, 6538, 6662 AND LICENCE # 625229) WILL NOT EXCEED 200 HECTARES.
7. THE MAXIMUM ANNUAL TONNAGE LIMIT FOR EACH OF THE LICENSES IS AS FOLLOWS:
   LICENCE #6538: UNLIMITED
   LICENCE #6662: 725,000 TONNES
   LICENCE #6613: 907,000 TONNES
   LICENCE # 625229: 500,000 TONNES
8. SURVEY STAKES MARKING THE TOE OF THE REQUIRED 3:1 SLOPES WILL BE MAINTAINED UNTIL THE SLOPE HAS BEEN ESTABLISHED AND STABILIZED.
9. BELOW WATER EXTRACTION WILL BEGIN A MINIMUM OF 4m AWAY FROM THE TOE OF ANY 3:1 SLOPE.
10. EXTRACTION ALONG THE EDGE OF THE PROPOSED POND SHALL TAKE PLACE SO THAT THE EXCAVATED BOTTOM WILL HAVE A 3:1 SLOPE UNTIL THE WATER IN THE POND REACHES A 2m DEPTH. EXTRACTION BEYOND THIS DEPTH WILL BE CARRIED OUT SO THAT THE BED OF THE POND WILL HAVE A 2:1 SLOPE. SEE TYPICAL SHORELINE SECTION IN DETAIL 1/4 ON SHEET 4.
11. SUBJECT TO THE OVERRIDES IDENTIFIED FOR THE LICENSES #6538, #6613, AND #6612, THE REHABILITATION OF ABOVE WATER SIDE SLOPES SHALL BE A MAXIMUM (I.E. NO STEEPER THAN) 3 HORIZONTAL TO 1 VERTICAL (3:1) SLOPES.

SITE PLAN OVERRIDE LICENCE No. 6538, 6613 AND 6662

ITEM	SECTION
1. FENCING MAY BE OMITTED ALONG COMMON BOUNDARIES BETWEEN LICENCES HELD BY CBM AS INDICATED ON THE PLANS, AS LONG AS THE LICENCEE REMAINS THE SAME FOR THE SUBJECT PROPERTIES. FENCING MAY ALSO BE OMITTED ALONG BOUNDARIES OF LICENCE 6613 WHERE IT ABUTS THE BEAVERTON WETLAND AND IN THE WETLAND ALONG THE EASTERN BOUNDARY. FENCING MAY ALSO BE OMITTED ALONG THE LICENCED BOUNDARIES THAT BUT THE M4 - 3 ZONE SHOWN ON DRAWING 1, PROVIDED THAT THE PERIMETER FENCING IN THIS ZONE CONTINUES TO ENCLOSE THE EXTRACTIVE AND ASSOCIATED OPERATIONS.	5.1
2. EXTRACTIVE SETBACKS HAVE BEEN REMOVED ALONG COMMON BOUNDARIES BETWEEN LICENCES HELD BY CBM AS INDICATED ON THE PLANS, AS LONG AS THE LICENCEE REMAINS THE SAME FOR THE SUBJECT PROPERTIES AND ALONG THAT PORTION OF THE LICENCED BOUNDARIES THAT ABUT THE M4 - 3 ZONE, PROVIDED THIS ZONE REMAINS THE PROPERTY OF THE LICENCEE. EXTRACTION HAS OCCURRED WITHIN THE 30m SETBACK ALONG THE NORTH BOUNDARY OF LICENCE 6613 IN LOT 11, CONCESSION 3, PRIOR TO ORIGINALLY LICENCING THE PROPERTY UNDER THE PITS AND QUARRIES CONTROL ACT. NO FURTHER EXTRACTION IS PERMITTED IN THIS AREA. THE EXTRACTION SETBACK HAS BEEN REMOVED ALONG THE EAST BOUNDARY OF AREA 1 AND 1A; THE LICENSEE OWNS THE ADJACENT PROPERTY.	5.10.1
3. THE EXISTING TOPSOIL/ OVERBURDEN STOCKPILE IN THE NORTHWEST CORNER OF LICENCE 6538 MAY REMAIN IN THE SETBACK AS IT WAS PREVIOUSLY PERMITTED UNDER THE PITS AND QUARRIES CONTROL ACT. NO ADDITIONAL MATERIAL MAY BE ADDED TO THESE STOCKPILES WITHIN 30m OF THE BOUNDARY OF THE SITE.	5.13
4. REHABILITATION SLOPES THAT ARE STEEPER THAN 3:1 ARE PERMITTED IN THE FOLLOWING AREAS (AS SHOWN ON DRAWING 4): • NORTHWEST, NORTH AND NORTHEAST PORTIONS OF LICENCE #6538, SOUTH OF CONCESSION ROAD 4 • NORTHWEST PORTION OF LICENCE #6613, SOUTH OF CONCESSION ROAD 4 • NORTH SIDE OF CONCESSION ROAD 4 • SOUTHWEST PORTION OF LICENCE #6662, NORTH OF 2ND CONCESSION	5.19
5. EXTRACTION WILL BE ALLOWED WITHIN THE SOUTHERN PART OF THE EASTERN SETBACK OF THE NORTH PIT (LOT 10, CONCESSION 4), NORTH OF BROCK 4TH LINE ROAD AND ADJACENT TO 'HOME OWNERS' PROPERTIES, TO 3m FROM THE LICENCE BOUNDARY AS PER SUNDERLAND NORTH PIT - LANDOWNER AGREEMENT, NOVEMBER 1997.	5.10.1

SITE PLAN OVERRIDE CONCESSION ROAD 4 PIT LICENCE No 625229

THE FOLLOWING CONDITIONS ILLUSTRATED ON THIS PLAN VARY FROM THE OF THE PROVINCIAL STANDARDS MADE UNDER THE AGGREGATE RESOURCES ACT

ITEM	SECTION
1. EXCAVATION SETBACK ALONG THE PROPOSED NORTH AND SOUTH BOUNDARY IS REDUCED FROM 30m TO 0m. ADJACENT LANDS UNDER SAME OWNERSHIP.	5.10.1
2. FENCING TO BE REMOVED AND OMITTED ALONG THE PROPOSED NORTH AND SOUTH BOUNDARIES ADJACENT TO CBM'S EXISTING SUNDERLAND PIT (LICENCE No. 6538 AND LICENCE No. 6613). FENCING TO BE MAINTAINED ON ADJACENT LICENCED PERIMETER.	5.1
3. TOPSOIL, OVERBURDEN STOCKPILES SHALL BE ALLOWED WITHIN 30m OF THE PROPOSED NORTH AND SOUTH LICENCE BOUNDARY DUE TO SAME OWNERSHIP.	5.13.1
4. NO GATES REQUIRED AT THE PROPOSED ENTRANCE/ EXIT ALONG THE NORTH AND SOUTH BOUNDARY. LICENSEE WILL MAINTAIN GATES AT EXISTING ENTRANCE/ EXITS OF THE EXISTING SUNDERLAND PIT LICENCE No. 6538 AND LICENCE No. 6613.	5.2
5. TO ALLOW FOR REHABILITATED SLOPES BELOW WATER THAT ARE 2:1 AND/ OR GENTLER THAN 2:1.	5.19.1
6. THIS LICENCE WILL BE OPERATED IN CONJUNCTION WITH THE LICENCES TO THE NORTH AND SOUTH (LICENCE No. 6538 AND No. 6613) AND OVERBURDEN AND TOPSOIL MAY BE EXCHANGED BETWEEN THE SITE FOR PROGRESSIVE REHABILITATION.	5.16 AND 5.17
7. ROAD REMOVAL AND MINOR REGRADING WILL OCCUR WITH EAST AND WEST SETBACKS.	5.10.2.1

OPERATIONAL NOTES LICENCE # 625229

THE FOLLOWING NOTES APPLY TO CONCESSION ROAD 4 PIT LICENCE # 625229 ONLY.

RESOURCE INFORMATION

1. RESOURCE INFORMATION IS OBTAINED FROM ARIP MAPPING, GEOLOGICAL MAPPING AND BOREHOLES DRILLED BY JAGGER HIMS LIMITED, IN OCTOBER 2002 (REFER TO AGGREGATE RESOURCE ASSESSMENT REPORT DATED OCTOBER 2003), AND BY APPLICANT.

EXTRACTION/ PROCESSING/ HAULING INFORMATION

2. THE CONCESSION ROAD 4 PIT SITE PLAN DEPICTS A SCHEMATIC OPERATIONS AND REHABILITATION SEQUENCE. WHEN PARTIAL REHABILITATION OF A PHASE IS POSSIBLE IT SHALL BE CARRIED OUT. NOT WITHSTANDING THE EXTRACTION AND REHABILITATION PROCESS NOTED ABOVE, DEMAND FOR CERTAIN PRODUCTS OR BLENDING OF MATERIALS MAY REQUIRE SOME DEVIATION IN THE EXTRACTION AND REHABILITATION PHASING. ANY DEVIATIONS FROM THE OPERATIONS SEQUENCE SHOWN WILL REQUIRE PRIOR WRITTEN APPROVAL FROM MNRF.
3. MAXIMUM NUMBER OF TONNES OF AGGREGATE TO BE REMOVED FROM THE SITE IN ANY CALENDAR YEAR IS 500,000 TONNES.
4. EXTRACTION OF SAND AND GRAVEL ABOVE THE WATER TABLE WILL TAKE PLACE IN BENCHES, WITH A MAXIMUM HEIGHT OF ±8 METRES PER BENCH AND ±8 METRES HORIZONTAL BETWEEN BENCHES (SEE SECTION D-D' DRAWING 3 OF 4). BELOW WATER EXTRACTION WILL BE BY DRAGLINE OR EXCAVATOR TO A MAXIMUM DEPTH OF ±250.00m ASL (SEE SECTION C-C' DRAWING 3 OF 4). THE GROUNDWATER TABLE IS ESTIMATED TO BE BETWEEN ±265.00-268.50m ASL (SEE HYDROGEOLOGICAL REPORT). WORK WILL INCLUDE EXTRACTION AND LOADING WITH FRONT END LOADERS AND TRANSPORTATION BY TRUCKS TO THE PLANT FOR PROCESSING. REFER TO SECTIONS ON DRAWING 3 OF 4 FOR FURTHER DETAILS.

   THERE SHALL BE NO PROCESSING (CRUSHING, SCREENING, OR AGGREGATE STOCKPILING) WITHIN THIS LICENCE. EQUIPMENT TO BE USED IN THE OPERATION OF THE PIT MAY INCLUDE TRUCKS, LOADERS, DRAGLINE, EXCAVATOR, BULLDOZERS, SCRAPERS, CONVEYORS AND OTHER RELATED EQUIPMENT.
5. NO SIGNIFICANT IMPACTS ARE EXPECTED DUE TO BELOW-WATER EXTRACTION (REFER TO DECEMBER 2010 HYDROGEOLOGICAL REPORT). HOWEVER, COMPLAINTS REGARDING WELL INTERFERENCE OR OTHER INDICATIONS OF IMPACT TO GROUNDWATER USERS IN THE AREA WILL BE INVESTIGATED, AND REMEDIAL ACTIONS TAKEN AS NEEDED IN ACCORDANCE WITH THE OPERATORS ESTABLISHED PROTOCOL AND TO THE SATISFACTION OF THE MNRF AND/ OR MOECC.
6. ALL EQUIPMENT, SCRAP AND MACHINERY ASSOCIATED WITH THE EXTRACTION OPERATIONS WILL BE REMOVED UPON COMPLETION OF EXTRACTION.

HYDROGEOLOGICAL INFORMATION

7. HYDROGEOLOGICAL INFORMATION INCLUDING GROUNDWATER ELEVATION WAS OBTAINED FROM REPORT BY GOLDER ASSOCIATES LTD., DATED DECEMBER 2010 AND EMAIL MEMO DATED APRIL 11, 2013.
8. THE WATER TABLE ELEVATION WITHIN THIS PROPERTY IS ESTIMATED TO BE AT ±265.0-268.5m ABOVE SEA LEVEL (A.S.L.) BASED ON THE HYDROGEOLOGICAL REPORT (SEE ABOVE).
9. SURFACE DRAINAGE ON THE PIT FLOOR WILL BE DIRECTED TO LOW AREAS FOR WATER TO INFILTRATE INTO THE GRANULAR MATERIALS ON THE PIT FLOOR. THERE SHALL BE NO OFF SITE DISCHARGE OF WATER.
10. MONITORING DOCUMENTATION OF THE INSTALLATION OF THE NEW MONITORING WELL REFERRED TO IN NOTE #4 OF THE HYDROGEOLOGICAL ASSESSMENT (BY GOLDER ASSOCIATES LIMITED) TECHNICAL RECOMMENDATIONS (THIS PAGE) SHALL BE PROVIDED TO MNRF WITHIN 30 DAYS. MONITORING RESULTS REFERRED TO IN NOTE #6 OF THE HYDROGEOLOGICAL ASSESSMENT (BY GOLDER ASSOCIATES LIMITED) TECHNICAL RECOMMENDATIONS (THIS PAGE) SHALL BE PROVIDED TO THE MNRF.

NOISE MITIGATION INFORMATION

11. NOISE MITIGATION MEASURES ARE TAKEN FROM A REPORT BY GOLDER ASSOCIATES LTD., DATED DECEMBER 2010 (SEE TECHNICAL RECOMMENDATIONS FOR DETAILS).
12. HOURS OF OPERATION:

SITE PREPARATION AND REHABILITATION	07:00-19:00 WEEKDAYS
EXCAVATION	07:00-19:00 WEEKDAYS
SHIPPING	07:00-19:00 WEEKDAYS

NO EXTRACTION OPERATIONS ON STATUTORY HOLIDAYS.

AIR QUALITY INFORMATION

13. WATER OR CALCIUM CHLORIDE WILL BE APPLIED TO INTERNAL HAUL ROADS AND PROCESSING AREAS AS OFTEN AS REQUIRED TO MITIGATE DUST. UPON RECEIVING A COMPLAINT, THE OPERATOR WILL TAKE IMMEDIATE ACTION TO CONTROL OFF SITE DUST EMISSIONS BY APPLYING WATER TO ALL SOURCE AREAS. SHOULD THIS NOT BE EFFECTIVE IN TIMES OF HIGH WINDS (OVER 70 KM/H), EXTRACTION WILL BE TEMPORARILY SUSPENDED UNTIL DUST HAS BEEN CONTROLLED.

SITE MANAGEMENT INFORMATION

MAINTENANCE/ PROTECTION OF VEGETATION INFORMATION

14. EXISTING VEGETATION WITHIN THE LICENCED AREA SHALL BE MAINTAINED IN A HEALTHY VIGOROUS GROWING CONDITION UNTIL SEQUENTIAL STRIPPING BEGINS OR UNTIL THE REHABILITATION IS COMPLETE. ANY VEGETATION PLANTED AS PART OF SITE IMPROVEMENTS OR PROGRESSIVE AND FINAL REHABILITATION WILL ALSO BE MAINTAINED IN A HEALTHY, VIGOROUS GROWING CONDITION.

FENCING INFORMATION

15. BOUNDARIES OF THE AREA TO BE LICENCED THAT ARE PRESENTLY FENCED ARE SHOWN ON DRAWING 1 OF 4, EXISTING FEATURES. PRIOR TO ANY STRIPPING OR PREPARATION, FENCING ON THE LICENCED BOUNDARIES WILL BE UPGRADED TO COMPLY WITH THE AGGREGATE RESOURCES ACT WHERE REQUIRED (REFER TO PHASING NOTES AND SITE PLAN OVERRIDES). ALL FENCING SHALL BE MAINTAINED.

TOPSOIL/SUBSOIL/OVERBURDEN STORAGE INFORMATION

16. TOPSOIL AND OVERBURDEN SHALL BE STRIPPED AND STORED SEPARATELY IN BERMS OR STOCKPILED. BERMS AND STOCKPILES OF TOPSOIL SHALL BE GRADED TO STABLE SLOPES AND VEGETATED TO PREVENT EROSION AND MINIMIZE DUST. STOCKPILES SHALL NOT EXCEED 15m.

BERM INFORMATION

17. BERMS SHALL CREATE AN EFFECTIVE VISUAL AND ACOUSTICAL BARRIER TO A MINIMUM OF 2.0 METRES ABOVE THE EXISTING GRADE, OR AS SPECIFIED IN GOLDER ASSOCIATES LTD. NOISE ASSESSMENT REPORT DATED DECEMBER 2010. BERMS SHALL NOT EXCEED 2(h):1(v). REFER TO TYPICAL BERM CROSS SECTION ON DRAWING 2. ALL BERMS SHALL BE VEGETATED IMMEDIATELY UPON COMPLETION. VEGETATION SHALL BE MAINTAINED TO MINIMIZE NOISE, DUST AND EROSION.

SCRAP STORAGE INFORMATION

18. ALL SCRAP AND USED MACHINERY GENERATED THROUGH THE OPERATIONS WITHIN THIS LICENCE WILL BE MOVED TO THE SCRAP AREA IN THE PERMANENT PROCESSING AREA ON THE ADJACENT LICENCE (No. 6538), A MINIMUM OF 30m FROM ANY WATER BODY AND A MINIMUM OF 30m FROM THE BOUNDARY OF THE SITE AND BE DISPOSED OF ON AN ONGOING BASIS. TREES TO BE REMOVED WITHIN THE EXTRACTION AREA WILL BE UTILIZED FOR FIREWOOD OR THEIR BEST USE. STUMPS, LOGS AND OVERSIZED ROCK MAY REMAIN ON SITE FOR FUTURE PROGRESSIVE REHABILITATION. UPON COMPLETION OF EXTRACTION, ALL SCRAP EQUIPMENT AND USED MACHINERY SHALL BE REMOVED.

PETROLEUM STORAGE INFORMATION

19. FUEL, OIL, RADIATOR AND HYDRAULIC FLUID, AND OTHER CHEMICALS NEEDED FOR THE MAINTENANCE AND FUNCTIONING OF ON-SITE AGGREGATE PROCESSING EQUIPMENT SHALL BE APPROPRIATELY STORED IN ABOVE-GROUND CONTAINER ON THE ADJACENT LICENCE (No. 6538) AND SHALL MEET THE REQUIREMENTS OF THE GASOLINE HANDLING ACT, AS AMENDED, AND THE GASOLINE HANDLING CODE AND REGULATIONS, AS AMENDED BY THE TECHNICAL STANDARDS AND SAFETY ACT (TSSA) AND LIQUID FUELS HANDLING CODE, AND IN ACCORDANCE WITH THE MINISTRY OF THE ENVIRONMENT'S CHEMICAL STORAGE GUIDELINES. ANY SPILL SHALL BE REMOVED AND DISPOSED OF AT AN APPROPRIATE MOECC APPROVED FACILITY.

IMPORTATION OF FILL INFORMATION

20. DURING EXTRACTION AND REHABILITATION IN THIS OR THE ADJACENT LICENCES NATIVE TOPSOIL AND OVERBURDEN MAY BE MOVED BETWEEN LICENCES AND TEMPORARILY STORED TO FACILITATE TIMELY EXTRACTION AND REHABILITATION.

TECHNICAL RECOMMENDATIONS LICENCE # 625229

THE FOLLOWING ARE THE TECHNICAL RECOMMENDATIONS FROM ALL OF THE EXPERTS' REPORTS AS OF DECEMBER 2010.

ARCHAEOLOGICAL ASSESSMENT - GOLDER ASSOCIATES LIMITED

SHOULD PREVIOUSLY UNDOCUMENTED ARCHAEOLOGICAL RESOURCES BE DISCOVERED, THEY MAY BE REPRESENTATIVE OF A NEW ARCHAEOLOGICAL SITE OR SITES AND THEREFORE SUBJECT TO SECTION 48(1) OF THE ONTARIO HERITAGE ACT. THE PROPONENT OR PERSON DISCOVERING THE ARCHAEOLOGICAL RESOURCES MUST CEASE ALTERATION OF THE SITE IMMEDIATELY AND ENGAGE A LICENSED CONSULTANT ARCHAEOLOGIST TO CARRY OUT ARCHAEOLOGICAL FIELDWORK, IN COMPLIANCE WITH SEC. 48(1) OF THE ONTARIO HERITAGE ACT.

THE CEMETERIES ACT REQUIRES THAT ANY PERSON DISCOVERING HUMAN REMAINS MUST NOTIFY THE POLICE OR CORONER AND THE REGISTRAR OF CEMETERIES, MINISTRY OF CONSUMER SERVICES.

HYDROGEOLOGICAL ASSESSMENT - GOLDER ASSOCIATES LIMITED

THE GROUNDWATER LEVEL MONITORING PROGRAM SHALL BE EXPANDED DURING EXTRACTION OF THE COMBINED SUNDERLAND PIT AND THE SITE. THE FOLLOWING IS RECOMMENDED:

1. THE GROUND AND MEASURING POINT ELEVATION OF TW07-1 IS TO BE SURVEYED TO A GEODETIC DATUM;
2. ASSUMING PERMISSION FROM THE REGION OF DURHAM IS GRANTED; GROUNDWATER LEVELS AT TW07-1 SHALL BE MONITORED ON A MONTHLY BASIS (FOR AS LONG AS POSSIBLE) DURING EXTRACTION OF THE CONCESSION ROAD 4 PIT;
3. THE WATER LEVELS IN THE NORTH PIT EXTRACTION POND AND THE TWO NORTHERN EXTRACTION PONDS IN THE MAIN PIT SHALL BE MONITORED MONTHLY DURING THE OPERATIONAL SEASON USING STAFF GAUGES OR SHALLOW WELLS SURVEYED TO A GEODETIC DATUM;
4. A NEW MONITORING WELL, COMPLETE WITH A SURVEY TO A GEODETIC DATUM, SHALL BE INSTALLED ON OR NEAR THE EASTERN BOUNDARY OF THE NORTH PIT, BETWEEN THE CURRENT POND AND THE ADJACENT ESTATE-LOT RESIDENTIAL DEVELOPMENT ('THE PINES') TO A DEPTH EQUIVALENT OF 260m ASL, PRIOR TO COMMENCEMENT OF EXTRACTION. ONCE INSTALLED THIS WELL SHALL BE ADDED TO THE CURRENT MONITORING PROGRAM FOR THE SITE AND SHALL BE MONITORED MONTHLY DURING THE OPERATIONAL LIFE OF THE SITE;
5. GROUNDWATER SAMPLES SHALL BE COLLECTED ANNUALLY AT THIS NEW WELL (BEGINNING AT THE TIME OF INSTALLATION AND CONTINUING FOR THE OPERATIONAL LIFE OF THE SITE) FOR LABORATORY ANALYSIS OF GENERAL CHEMISTRY, METALS AND PETROLEUM HYDROCARBONS; AND
6. ALL MONITORING RESULTS FOR THE SITE SHALL BE INCLUDED IN THE ANNUAL MONITORING REPORT FOR THE SUNDERLAND PIT SUBMITTED TO THE MNRF.

NATURAL ENVIRONMENT - GOLDER ASSOCIATES LIMITED

NO RECOMMENDATIONS.

NOISE ASSESSMENT - GOLDER ASSOCIATES LIMITED.

THE IMPLEMENTATION OF NOISE CONTROL MEASURES SHALL BE REQUIRED TO ENSURE COMPLIANCE WITH MOECC NOISE GUIDELINES.

- THE IMPLEMENTATION OF AN EARTH BERM, ALONG THE EASTERN EDGE OF THE PROPERTY LINE IS RECOMMENDED TO MITIGATE THE EFFECTS OF THE NOISE AT POR1 AND POR3.

THE FOLLOWING PROVIDES GENERAL PIT OPERATION NOISE CONTROLS THAT SHALL BE FOLLOWED IN ALL OF THE OPERATIONAL SEQUENCES OF THE EXTRACTION AREA.

- PIT EQUIPMENT SHALL SATISFY OVERALL SOUND PRESSURE LEVELS SUMMARIZED BELOW:

POINT OF RECEPTION ID	POINT OF RECEPTION DESCRIPTION	MOECC PERFORMANCE LIMIT DESIGNATION	LOCATION	ELEVATION (m)
POR1	RESIDENTIAL	CLASS 2[1]	S1005, CONCESSION #4	293
POR2	RESIDENTIAL	CLASS 3[2]	WEST OF SITE ALONG CONCESSION #4	287
POR3	RESIDENTIAL	CLASS 2[1]	WEST SIDE OF THE PINES LANE	285
POR4	RESIDENTIAL	CLASS 2[1]	WEST SIDE OF THE PINES LANE	283
POR5	RESIDENTIAL	CLASS 2[1]	WEST SIDE OF THE PINES LANE	283
POR6	RESIDENTIAL	CLASS 2[1]	WEST SIDE OF THE PINES LANE	282

NOTES:
[1] CLASS 2 DAYTIME AND NIGHT-TIME PERFORMANCE LIMITS ARE 50 AND 45 dBA RESPECTIVELY.
[2] CLASS 3 DAYTIME AND NIGHT-TIME PERFORMANCE LIMITS ARE 45 AND 40 dBA RESPECTIVELY.

- EQUIPMENT SHALL BE MAINTAINED IN GOOD MECHANICAL CONDITION, ALL MANUFACTURES NOISE CONTROLS TO BE MAINTAINED TO ORIGINAL PERFORMANCE;
- ON-SITE ROAD-WAYS TO BE MAINTAINED TO LIMIT NOISE RESULTING FROM TRUCKS DRIVING OVER RUTS AND POT-HOLES; AND
- GENERALLY, THE ACTIVE WORKING FACE SHALL ACT AS A BARRIER, SHIELDING THE RECEPTOR LOCATIONS FROM THE NOISE EMITTED BY THE PIT EQUIPMENT.

AIR QUALITY ASSESSMENT - GOLDER ASSOCIATES LIMITED

NO RECOMMENDATIONS.

OPERATIONAL NOTES LICENCE # 6538

THE FOLLOWING NOTES APPLY TO LICENCE # 6538 ONLY.

RECYCLING INFORMATION

1. RECYCLING OF CONCRETE, ASPHALT AND AGGREGATE BASE MATERIAL FROM ROAD CONSTRUCTION PROJECTS WILL BE PERMITTED ON THIS SITE WITHIN THE DESIGNATED PROCESSING PLANT AND STOCKPILING AREA.
2. RECYCLABLE ASPHALT MATERIAL WILL NOT BE STOCKPILED WITHIN 30M OF ANY WATER BODY, OR WITHIN 2M OF THE SURFACE OF THE ESTABLISHED WATER TABLE.
3. ANY REBAR OR OTHER METAL WILL BE REMOVED FROM THE RECYCLABLE MATERIAL DURING PROCESSING AND PLACED IN THE DESIGNATED SCRAP AREA, WHICH IS REMOVED ON AN ONGOING BASIS.
4. REMOVAL OF RECYCLED AGGREGATE IS TO BE ONGOING.
5. ONCE THE AGGREGATE ON SITE HAS BEEN DEPLETED, THERE WILL BE NO FURTHER IMPORTATION OF RECYCLABLE MATERIAL PERMITTED.
6. AFTER FINAL REHABILITATION HAS BEEN COMPLETED AND APPROVED IN ACCORDANCE WITH THE SITE PLAN, ALL RECYCLING OPERATIONS WILL CEASE.

LEGEND

BOUNDARY OF AREA TO BE LICENCED
REGULATORY SETBACK LINE
150m BOUNDARY
CONCESSION/LOT LINE
BOUNDARY OF ENVIRONMENTAL PROTECTION AREA
OTHER LANDS OWNDED BY APPLICANT
LIMIT OF BELOW WATER EXTRACTION
SURFACE RUNOFF
EXISTING VEGETATION
EXISTING SILT POND
EXISTING WETLAND
EXISTING BERM
EXISTING PRODUCT STOCKPILE/ STOCKPILING AREA
EXISTING PIT FACE
FILL AREAS
UNDISTURBED AREAS
EXISTING STRIPPED AREAS
OPEN WATER
STOCKPILING AREA
REHABILITATED AREAS
PROPOSED TREE SCREEN
EXISTING POST AND WIRE FARM FENCE (1.2m HIGH)
EXISTING BUILDING
EXISTING PIT ENTRANCE/ EXIT
LOCATION OF SECTION LINES
MAJOR HAUL ROADS
MATERIAL MOVEMENT
DIRECTION OF WATER FLOW
DIRECTION OF MOVEMENT OF BELOW WATER EXTRACTION
DIRECTION OF MOVEMENT OF ABOVE WATER EXTRACTION
AREA STRIPPED OF TOPSOIL

OPERATIONAL NOTES LICENCE #6538, #6613, AND #6662

THE FOLLOWING NOTES APPLY TO LICENCE #6538, #6613, AND #6662 ONLY.

GENERAL INFORMATION

26. THIS DEPOSIT IS HIGHLY VARIABLE AND HAS RESULTED IN A COMPLEX MINING PATTERN TO PROVIDE AN APPROPRIATE BLEND OF MATERIALS TO THE PLANT. MOST STRIPPED AREAS CONTAIN SOME MARKETABLE MATERIAL WHICH CANNOT BE PROCESSED AT THIS TIME. THIS MAY NECESSITATE RE-EXCAVATING REHABILITATED AREAS AT A LATER DATE TO RECOVER THE AGGREGATE RESOURCES CONTAINED THEREIN. ANY RE-EXCAVATION WOULD REQUIRE WRITTEN APPROVAL FROM MNRF.

EXTRACTION/ PROCESSING/ HAUL INFORMATION

27. EXTRACTION OF AGGREGATES IS BY FRONT END LOADER AND PORTABLE DRAGLINE, AND IS TRANSPORTED TO THE PROCESSING PLANT BY TRUCK FOR CRUSHING, WASHING, SCREENING AND STACKING. PORTABLE EQUIPMENT FOR CRUSHING, SCREENING AND STACKING MAY BE USED AT THE FACE FROM TIME TO TIME. THE MAXIMUM HEIGHT OF EACH LIFT IS 8m. THE MAXIMUM DEPTH OF EXTRACTION WILL NOT EXCEED THE REHABILITATED GRADES AS SHOWN ON DRAWING #4, EXCEPT IN AREAS WHERE BACKFILLING IS PERMITTED TO ESTABLISH 3:1 AND 2:1 SIDE SLOPES ABOVE THE WATER TABLE. UNDERWATER EXTRACTION WILL BE LIMITED TO WITHIN THE AREAS OF LAKE/POND DEVELOPMENT SHOWN ON DRAWING 5.
28. MATERIAL FROM AREA 1 WILL BE TRANSPORTED TO THE PLANT SITE THROUGH A TUNNEL UNDER REGIONAL ROAD 13.
29. WATER TO FEED THE WASH PLANT IS PUMPED FROM GROUNDWATER ON SITE AND RECIRCULATED THROUGH SILTATION AND POLISHING PONDS ADJACENT TO THE PLANT. OVERFLOW WATER IS DISCHARGED INTO THE BEAVERTON RIVER, IN THE SOUTHEAST CORNER OF THE SITE. IN RECOGNITION OF THE VALUE OF THE BEAVERTON RIVER WETLANDS AND THE ASSOCIATED VEGETATED FRINGE. A VOLUNTARY REDUCTION IN LICENSED AREA IS PROPOSED BY THE APPLICANT. THIS WILL PROVIDE A MINIMUM 200m BUFFER BETWEEN THE RIVER AND THE EXTRACTION SITE.

HYDROGEOLOGICAL INFORMATION

30. ELEVATIONS OF SURFACE WATER WITHIN THE LICENCES WERE OBTAINED FROM AIR PHOTO INTERPRETATION AND EXISTING WATER LEVELS ON SITE, AND VARY FROM +268 IN THE NORTH TO +265 IN THE SOUTH.
31. THE LICENSEE WILL COLLECT WATER LEVEL MEASUREMENTS FROM MONITORING WELL 9, LOCATED IN CLOSE PROXIMITY TO PRIVATE WELL MOECC #4605946, TO MONITOR CHANGES IN THE WATER LEVEL OVER TIME AS THE EXTRACTION PONDS ARE MERGED. MONITORING WELL 9 WILL BE INCLUDED IN THE PERMIT-TO-TAKE-WATER MONITORING PROGRAM FOR THE SITE TO BE SUBMITTED ANNUALLY TO MNRF WITH COPIES TO MOECC AND DURHAM REGION. SHOULD A WELL INTERFERENCE COMPLAINT BE RECEIVED, THE LICENSEE SHALL INVESTIGATE THE CAUSE OF THE INTERFERENCE, AND, IF PIT OPERATIONS ARE FOUND TO BE THE CAUSE OF THE INTERFERENCE, PROVIDE THE PROPERTY OWNER WITH A TEMPORARY SUPPLY OF WATER. THE RESULTS OF THE INTERFERENCE INVESTIGATION WILL BE REPORTED TO THE MNRF, MOECC, DURHAM REGION AND THE PROPERTY OWNER; IF IT IS FOUND TO BE CAUSED BY THE LICENSEE, THE PROPERTY OWNER SHALL BE PROVIDED WITH A PERMANENT NEW WATER SUPPLY COMPARABLE TO THE FORMER SUPPLY, AT THE LICENSEE'S EXPENSE.

SITE MANAGEMENT INFORMATION

FENCING INFORMATION

31. THE SITE IS CURRENTLY FENCED WITH A 1.2m HIGH POST AND WIRE FENCE WITH METAL 1.2m HIGH GATES, WITH THE EXCEPTION OF THOSE AREAS COVERED BY SITE PLAN OVERRIDES. REFER TO SITE PLAN OVERRIDES ON THIS PAGE.

BERM INFORMATION

32. BERMS SHALL CREATE AN EFFECTIVE VISUAL BARRIER TO A MINIMUM HEIGHT OF 2.0m ABOVE EXISTING GRADE; SIDE SLOPES ON BERMS SHALL NOT EXCEED 2:1 UNLESS THEY CURRENTLY EXIST IN A STABLE STATE.

TREE SCREEN INFORMATION

33. TREE SCREENS ALONG THE PERIMETER OF THE PROPERTY AND ALL OTHER VEGETATION ON REHABILITATED AREAS SHALL BE MAINTAINED IN A HEALTHY, VIGOROUS GROWING CONDITION FOR THE DURATION OF THE OPERATION. DEAD VEGETATION SHALL BE REPLACED WITHIN TWO YEARS, OR AS DIRECTED IN WRITING BY THE AGGREGATE RESOURCES OFFICER.

SCRAP STORAGE INFORMATION

34. SCRAP IS STORED WITHIN THE PERMANENT PROCESSING PLANT AREA AND REMOVED ON A REGULAR BASIS.

TOPSOIL/ OVERBURDEN STORAGE INFORMATION

35. MAXIMUM OVERBURDEN/ TOPSOIL STOCKPILE HEIGHT IS 20m. MAXIMUM PRODUCT STOCKPILE HEIGHT IS 33.3m.

IMPORTATION OF TOPSOIL FOR REHABILITATION

37. THE IMPORTATION OF TOPSOIL IS PERMITTED (FOR LICENCE No. 6538) FOR REHABILITATION PURPOSES- REFER TO OPERATIONAL PLAN PHASE A FOR SIZE AND LOCATION. THE FOLLOWING CONDITIONS MUST BE MET:
    - NO MORE THAN 10,000m³ OF IMPORTED TOPSOIL WILL BE STOCKPILED ONSITE AT ANY GIVEN TIME;
    - THE TOPSOIL STOCKPILE AREA WILL BE 1.25 HECTARES IN SIZE, FORMED ACCORDING TO THE DIMENSIONS OUTLINED IN THE MNRF LETTER DATED DECEMBER 24, 2009;
    - TRUCKS HAULING TOPSOIL SHALL BE RESTRICTED TO USING THE MAIN ENTRANCE LOCATED ON THE NORTH SIDE OF REGIONAL ROAD 13;
    - THE IMPORTED TOPSOIL SHALL BE SPREAD ON REHABILITATED 3:1 SLOPES. MAXIMUM DEPTH OF TOPSOIL WILL BE 15cm (6 INCHES);
    - THE MAXIMUM HEIGHT OF THE TOPSOIL STOCKPILED IN THIS AREA SHALL BE 2m;
    - SHOULD THE IMPORTED TOPSOIL BE REMAINING IN THIS AREA FOR LONGER THAN A ONE YEAR PERIOD, THIS STOCKPILED MATERIAL IS TO BE SEEDED TO CONTROL DUST AND EROSION.
    - SHOULD CONDITIONS IN AND OR AROUND THIS LICENCED PROPERTY CHANGE, AND AT THE REQUEST OF MNRF, NO ADDITIONAL TOPSOIL WILL BE IMPORTED TO THE SITE.

Ministry of Northern Development, Mines, Natural Resources and Forestry
APPROVED
Under the *Aggregate Resources Act*
Date: February 22, 2022

NO.	DATE	REVISIONS	OWNER	HM	MNR
5.	MAY14 2015	AS PER MNRF COMMENTS			
4.	MAR27 1995	AS PER MNR COMMENTS			
3.	JAN18 1995	AS PER MNR COMMENTS			
2.	NOV23 1993	AS PER MNR COMMENTS			
1.	JULY8 1991	TO INCLUDE LICENCE #740827 (6613)			

Pre Licence Review

NO.	DATE	REVISIONS	OWNER	HM	MNR
7.	OCT 2021	SHOW EXISTING HAUL ROUTE SOUTH OF AREA 4.		✓	
6.	SEPT 2021	ADDED RECYCLING NOTES TO LICENCE #6538		✓	
5.	OCT 2020	REMOVED EAST SETBACK ALONG AREA 1 AND 1A, ADDITIONAL OVERRIDE #2		✓	
4.	JULY 2019	UPDATE PHASE B NOTE 5, AND PHASE F NOTE 3 AND SHOW ADDITIONAL STORAGE BERM ON WESTERN BOUNDARY OF AREA 3		✓	
3.	MAY 2018	UPDATE NOTE #31 AND HYDROGEOLOGICAL ASSESSMENT TECHNICAL RECOMMENDATION #3. INCORPORATED REDLINE AMENDMENT FROM SEPT. 2015.		✓	
2.	SEP24 2015	REMOVAL OF HATCHED AREA MARKED AS FINAL REHAB. M.L., E.M.			
1.		REVISE BELOW WATER EXTRACTION AREAS, REVISE PHASING, ADDITION OF SOME PORTABLE STRUCTURES, AMALGAMATING THE OPERATION OF ALL LICENCES, AND THE SURRENDER OF THE LICENSED LANDS REQUIRED TO BUILD THE 4TH TO 5TH LINE BY-PASS, AND INCORPORATING PREVIOUS APPROVED AMENDMENTS.			

Site Plan Amendments

Harrington McAvan Ltd
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Unionville, Ontario L3R 2E5
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Project Name

ST MARYS
St. Marys Cement Inc. (Canada)
55 Industrial Street
Toronto, Ontario
M4G 3W9
(416) 423–1300

SUNDERLAND PIT

LICENCE 6538 LOTS 7, 8, 9 & 10; CONCESSION 2, 3 & 4
LICENCE 6613 LOTS 10 & 11; CONCESSION 3
LICENCE 6662 LOTS 8; CONCESSION 3
LICENCE NO 625229 CLOSED ROAD ALLOWANCE BETWEEN PART LOT 10; CONCESSION 3 AND PART LOT 10; CONCESSION 4,
TOWNSHIP OF BROCK
REGIONAL MUNICIPALITY OF DURHAM

Scale 1:5000
0 50 100 150 200m

North

Stamp
RICHARD McAVAN

Drawing Status
SUBMITTED FOR REVIEW & APPROVAL

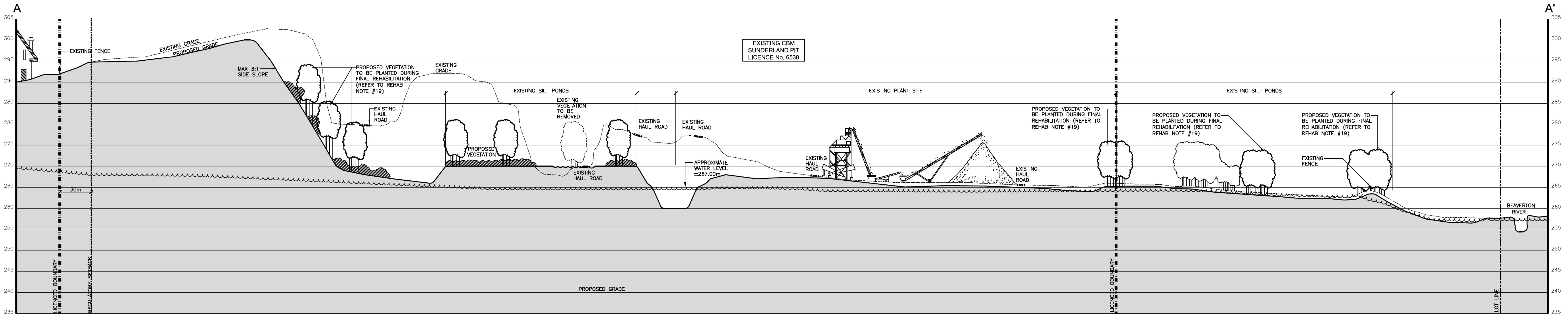
Drawn S.J.P./S.B.
Checked G.D.H./R.M.
Issue Date JAN 2022

Drawing Title
OPERATIONAL PLAN

Project Number
88-02

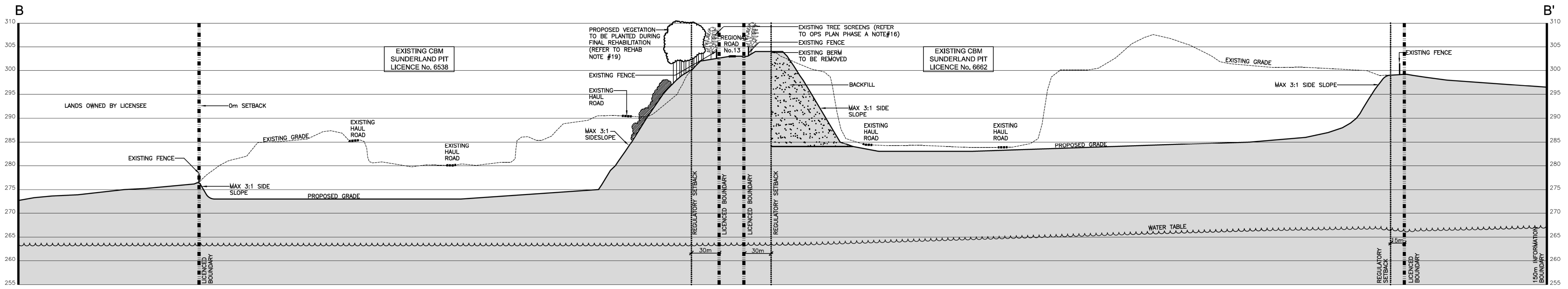
Drawing Number
2 OF 4

FILE NAME: 8802/COMBINEDSITEPLANS/COMP/8802-2.DWG
PLOT DATE: JANUARY 11, 2022



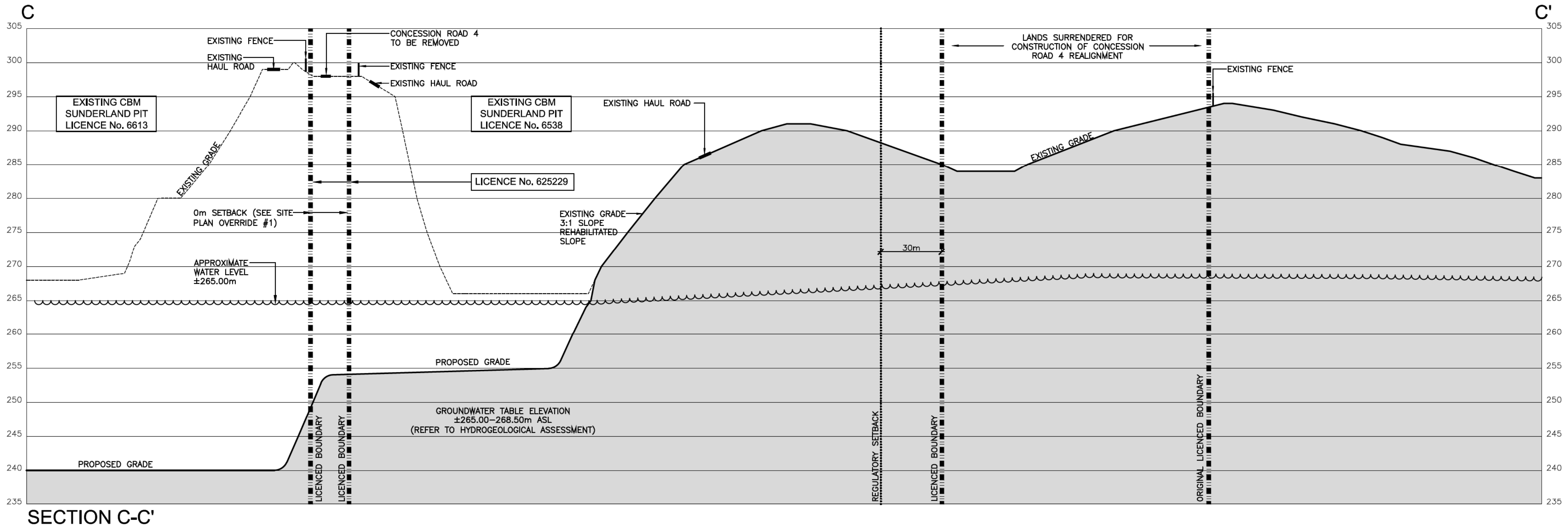
SECTION A-A'

VERTICAL SCALE 1:400
HORIZONTAL SCALE 1:2000



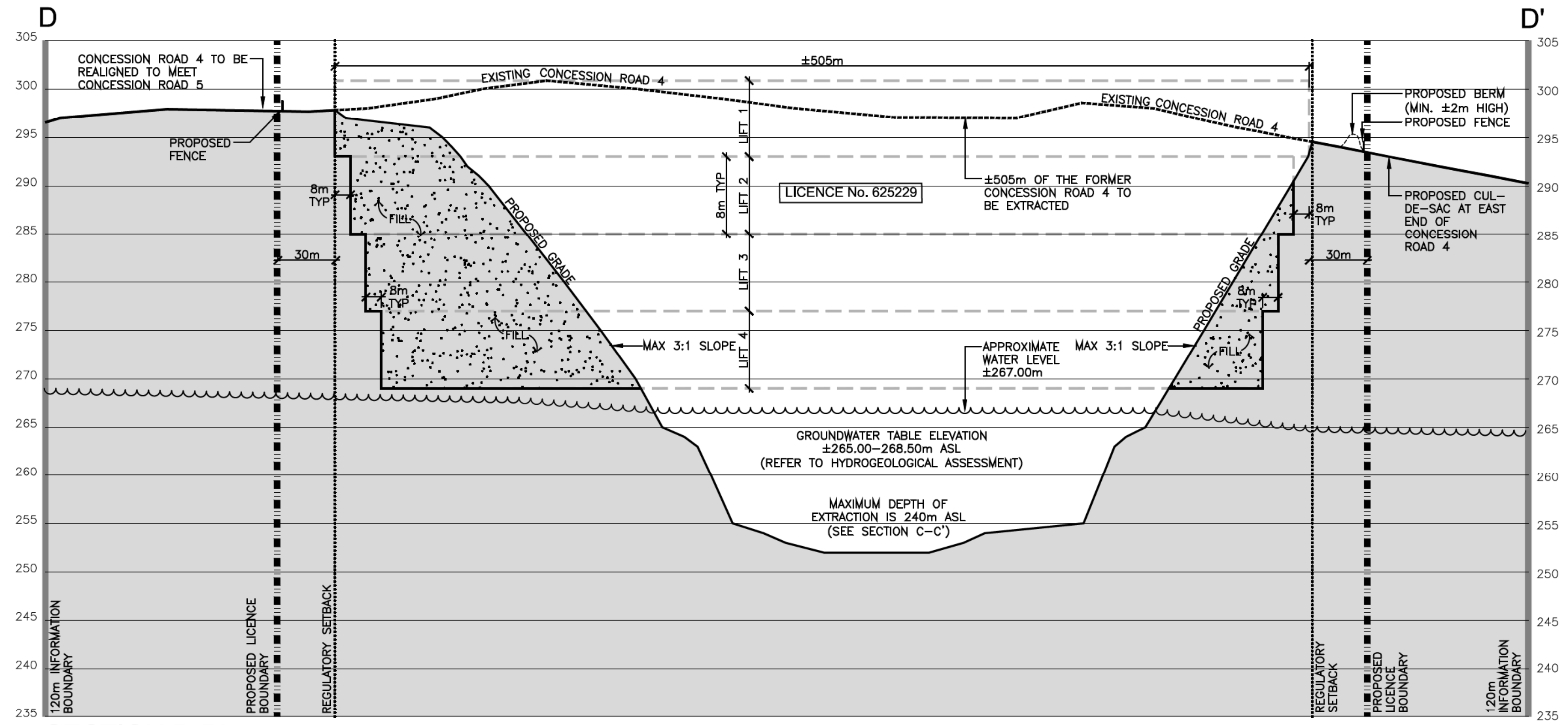
SECTION B-B'

VERTICAL SCALE 1:400
HORIZONTAL SCALE 1:2000



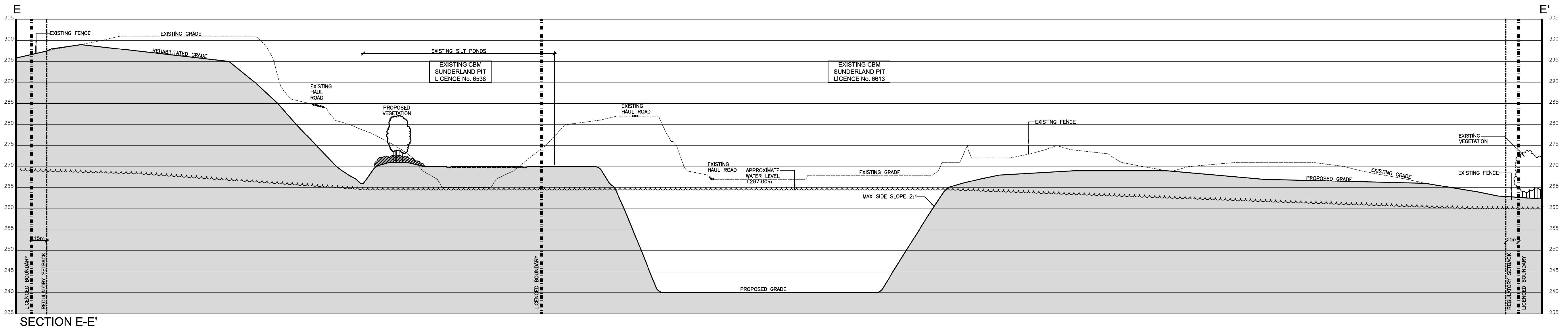
SECTION C-C'

VERTICAL SCALE 1:400
HORIZONTAL SCALE 1:2000



SECTION D-D'

VERTICAL SCALE 1:400
HORIZONTAL SCALE 1:2000

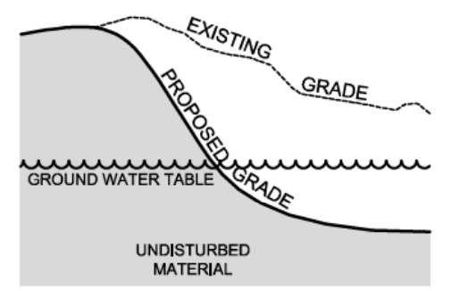


SECTION E-E'

VERTICAL SCALE 1:400
HORIZONTAL SCALE 1:2000

LEGEND

BOUNDARY OF AREA TO BE LICENCED
150m INFORMATION BOUNDARY
REGULATORY SETBACK
LOT LINE



EXISTING VEGETATION
EXISTING VEGETATION TO BE REMOVED
EXISTING TREE SCREEN
PROPOSED VEGETATION
BACKFILL

SECTIONS NOTES

GENERAL INFORMATION

1. SECTION LINES ARE LOCATED ON THIS DRAWING 1 OF 4 (EXISTING FEATURES PLAN), DRAWING 2 OF 4 (OPERATIONAL PLAN) AND DRAWING 4 OF 4 REHABILITATION PLAN.

Ministry of Northern Development, Mines, Natural Resources and Forestry
APPROVED
Under the *Aggregate Resources Act*
Date: February 22, 2022

NO.	DATE	REVISIONS	OWNER	HM	MNR
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3.	JAN18 1995	AS PER MNR COMMENTS			
2.	NOV23 1993	AS PER MNR COMMENTS			
1.	JULY8 1991	TO INCLUDE LICENCE #740827 (6613)			

Pre Licence Review

NO.	DATE	REVISIONS	OWNER	HM	MNR
3.	JAN 2022	REVISED SECTION A–A' AND E–E' TO REFLECT ADDITIONAL SILT POND REHABILITATION.			
2.	OCT 2020	REVISED SECTION B–B' TO SHOW 0M SETBACK ALONG EAST BOUNDARY OF AREA 1 AND 1A.			
1.		REVISE BELOW WATER EXTRACTION AREAS, REVISE PHASING, ADDITION OF SOME PORTABLE STRUCTURES, AMALGAMATING THE OPERATION OF ALL LICENCES, AND THE SURRENDER OF THE LICENSED LANDS REQUIRED TO BUILD THE 4TH TO 5TH LINE BY–PASS, AND INCORPORATING PREVIOUS APPROVED AMENDMENTS.			

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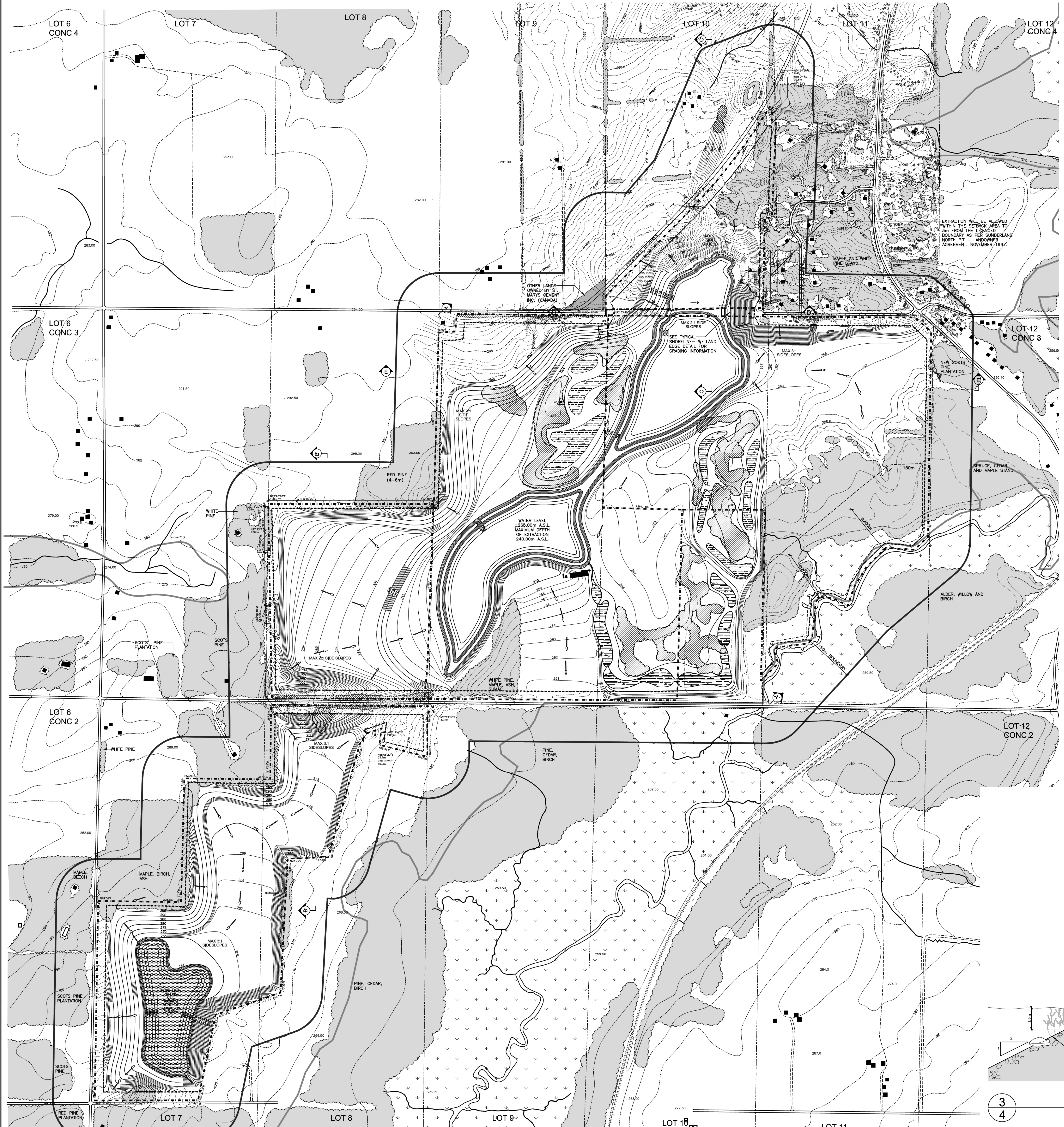
Scale AS SHOWN
North
Stamp RICHARD McCAVAN MEMBER
Drawing Status SUBMITTED FOR REVIEW & APPROVAL
Drawn S.J.P.
Checked G.D.H.
Issue Date JAN 2022
Drawing Title SECTION
Project Number 88-02
Drawing Number 3 OF 4

FILE NAME: 8802/COMBINEDSITEPLANS/8802–4.DWG
PLOT DATE: JANUARY 11, 2022



REHABILITATION NOTES
LICENCE #6538, #6613 AND #6662

THE FOLLOWING NOTES APPLY TO LICENCE #6538, #6613, AND #6662 ONLY.

SIDESLOPES AND PIT FLOOR REHABILITATION INFORMATION

GRADING INFORMATION

14. REHABILITATED OF SIDESLOPES SHALL BE AS FOLLOWS:

A. WHERE THE EXTRACTION FACE IS CURRENTLY AT THE SETBACK IN THE NORTH PIT (LICENCE No. 6538). FINAL SLOPES MAY BE CREATED BY BACKFILLING USING CLEAN INERT FILL FROM SOURCES FROM WITHIN THE AREA OF THE FOUR ADJACENT LICENCES 6538, 6613, 6662 & 625229 FOR AREAS ABOVE THE WATER TABLE.

B. WHERE THE EXTRACTION FACE HAS NOT CURRENTLY REACHED THE SETBACK LINE THE EXCAVATION WILL END LEAVING SUFFICIENT MATERIAL TO CREATE 3:1 AND 2:1 SLOPES AS SHOWN ON THE REHABILITATION PLAN. WHERE THE QUALITY OF MATERIAL IS EXCEPTIONAL, EXCAVATION MAY EXTEND TO THE SETBACK LINE PROVIDED THAT THE PROVISIONS OF SECTION 5.10.1 AND 5.19 OF SITE PLAN OVERRIDES ARE COMPLIED WITH, AND OVERBURDEN FROM AN ON-SITE SOURCE WILL BE USED TO CREATE FINAL 3:1 AND 2:1 SLOPES AS SHOWN ON THE REHABILITATION DETAILS (THIS PAGE). CLEAN, INERT IMPORTED FILL MAY BE USED TO CREATE STABLE FINAL SLOPES IF PRIOR WRITTEN APPROVAL OF MNRF IS GRANTED.

C. SIDE SLOPES SHALL HAVE A MINIMUM 300mm OF OVERBURDEN AND 100mm OF TOPSOIL.

D. SIDE SLOPES SHALL BE SEEDED AT A RATE OF 125KG.HA WITH THE FOLLOWING BY WEIGHT:

15% ANNUAL RYE	15% WHITE CEDAR
20% BUCKWHEAT	10% PERENNIAL RYE
20% ALFALFA	10% TALL FESCUE
20% CROWN VETCH	

15. REHABILITATION OF PIT FLOOR SHALL BE AS FOLLOWS:
REHABILITATION OF PIT FLOOR SHALL INCLUDE GRADING TO CREATE POSITIVE DRAINAGE AT A MINIMUM SLOPE OF 1% (AS SHOWN), INSTALLING A MINIMUM OF 300mm OVERBURDEN AND 50mm TOPSOIL, AND SEEDING AT A RATE OF 125KG/HA WITH THE FOLLOWING BY WEIGHT:

15% ANNUAL RYE	15% WHITE CLOVER
10% BUCKWHEAT	10% PERENNIAL RYE
20% ALFALFA	10% TALL FESCUE
20% CROWN VETCH	

TOPSOILING/ OVERBURDEN INFORMATION

16. QUANTITIES OF OVERBURDEN AND TOPSOIL ARE UNKNOWN AT THIS TIME. DEPTHS INDICATED ON THE REHABILITATION PLAN ARE DESIRABLE AMOUNTS WHICH MAY NOT BE ACHIEVABLE. EXISTING TOPSOIL AND OVERBURDEN WILL BE USED EQUALLY ACROSS THE SITE. IMPORTED TOPSOIL OR AMENDED SUBSOIL MAY BE REQUIRED TO COMPLETE REHABILITATION OF THESE LICENCES. THE USE OF AMENDED SUBSOIL WILL REQUIRE WRITTEN APPROVAL OF MNRF. ANY SUBSOIL IMPORTED MUST MEET TO MOECC REQUIREMENTS FOR TABLE 1.

POND AND SHORELINE REHABILITATION INFORMATION

17. LAKE REHABILITATION SHALL INCLUDE THE CREATION OF STRUCTURE USING OVERSIZED GRANULAR MATERIAL, COMPLETELY SUBMERGED LOGS AND STUMPS AND SEEDING AQUATIC WEED SPECIES IN SHALLOW AREAS. LAKES WILL FIRST BE STOCKED WITH A VARIETY OF FORAGE FISH. AFTER AQUATIC VEGETATION AND FORAGE FISH COMMUNITIES HAVE STABILIZED, THE LAKE WILL BE STOCKED WITH BROOK TROUT.

18. WETLAND REHABILITATION SHALL INCLUDE SHALLOW EXCAVATION TO CREATE POOLS, SEEDING WITH EMERGENT VEGETATION TO CREATE HABITAT APPROPRIATE TO ATTRACT A NESTING POPULATION OF BLACK TERNS AND ASSOCIATED WILDLIFE.

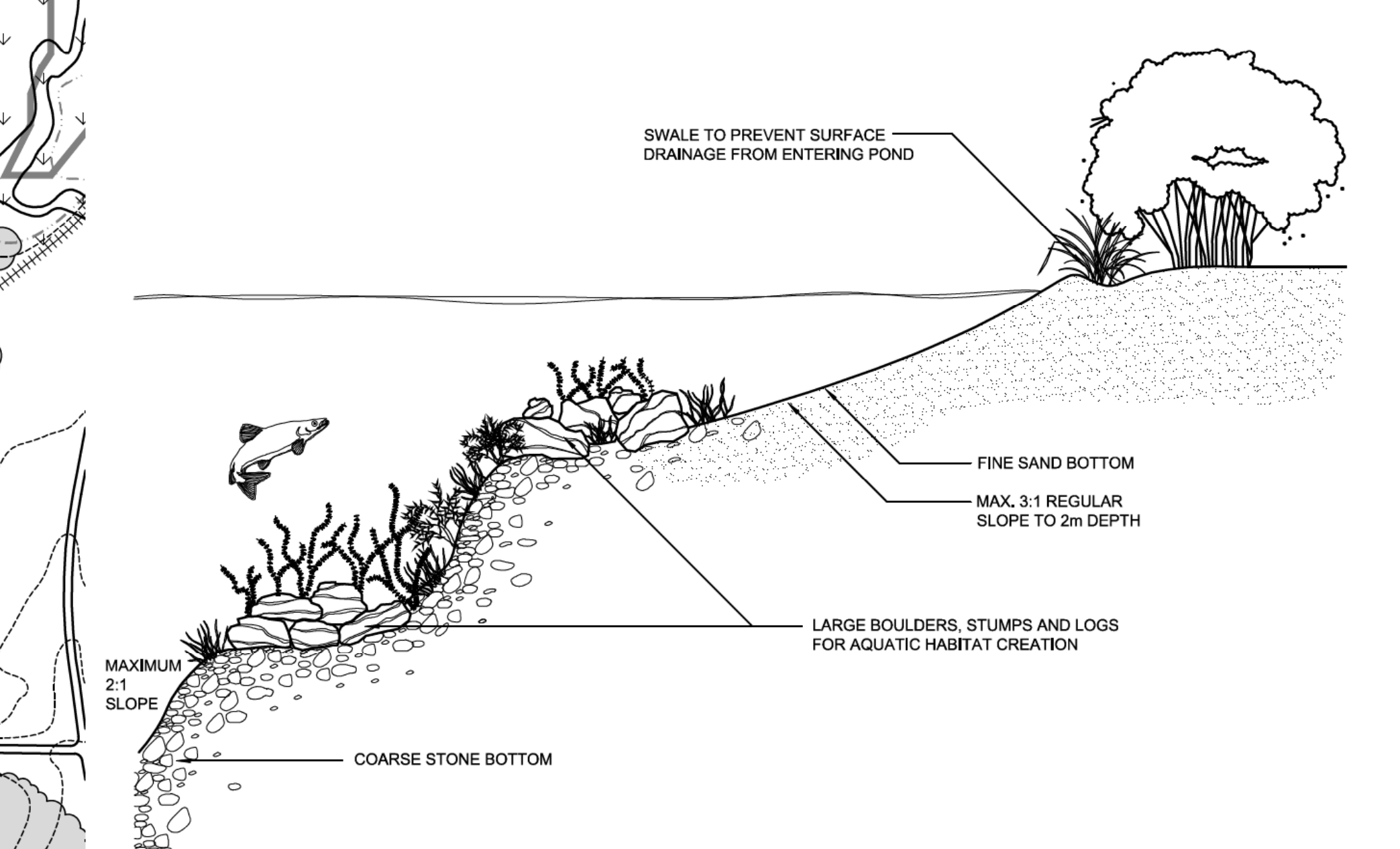
PROPOSED VEGETATION INFORMATION

19. THE FOLLOWING VEGETATION WILL BE PLANTED IN CLUSTERS AS SHOWN, AND SHALL INCLUDE:
- WHITE PINE, CEDAR, AND LARCH - 3 YEAR OLD SEEDLINGS
- BALSAM POPLAR, BLACK ASH, SILVER MAPLE - 15mm CALIPER, ±1.5m HIGH
- DOGWOOD AND SUMAC - 3 YEAR OLD PLANTS

GREEN BELT AGREEMENT JAN 29/08

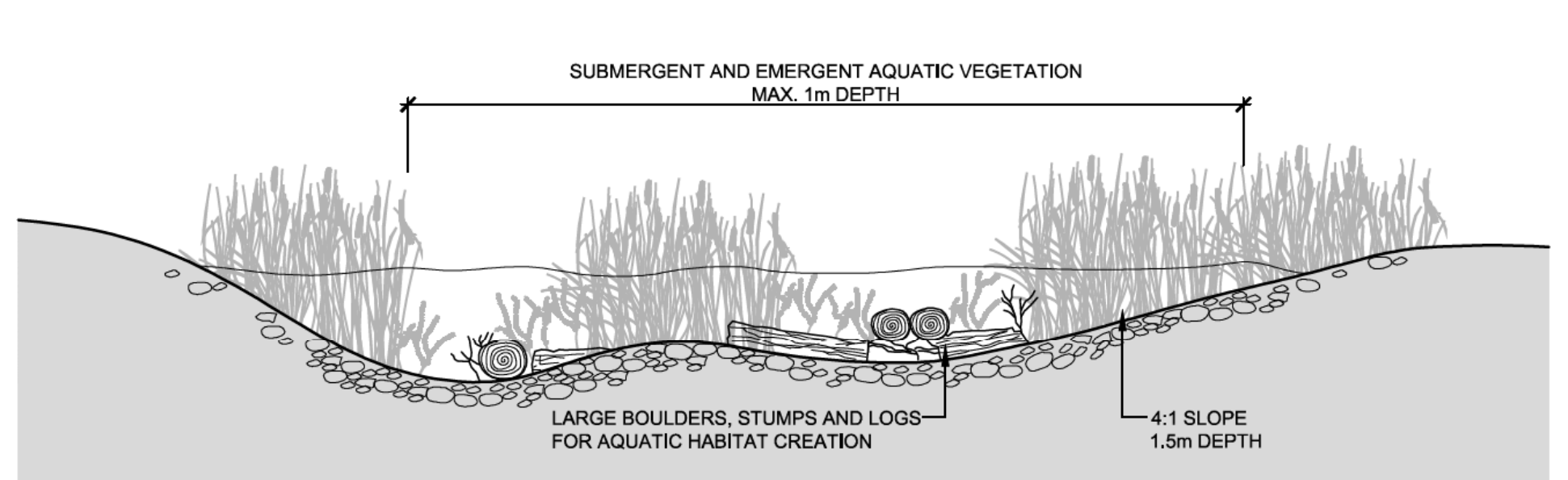
20. IT IS NOTED THAT 39.7 HECTARES OF LICENCE #6613, 6538 AND 6662 LIES WITHIN THE 'NATURAL HERITAGE SYSTEM' IDENTIFIED IN THE GREENBELT PLAN. FOR SUCH SITUATIONS, SECTION 4.3.2.6 OF THAT PLAN REQUIRES FINAL REHABILITATION OF AN AMOUNT OF LAND EQUAL TO THAT UNDER NATURAL VEGETATED COVER PRIOR TO EXTRACTION, AND NO LESS THAN 35%, TO BE REHABILITATED TO FOREST COVER. ALSO, WHERE THERE IS UNDERWATER EXTRACTION, NO LESS THAN 35% OF NON-AQUATIC LANDS OF EACH LICENCE IS TO BE REHABILITATED TO FOREST COVER. SUCH PLANTINGS ARE TO BE REPRESENTATIVE OF THE NATURAL ECOSYSTEM IN THE GENERAL AREA OF THE MINERAL AGGREGATE OPERATION.

21. AGGREGATE LICENCE REHABILITATION FOR LANDS WITHIN THE 'NATURAL HERITAGE SYSTEM' IS ALSO REQUIRED TO BE CARRIED OUT IN A MANNER SUCH THAT CONNECTIVITY OF ANY KEY HYDROLOGIC OR NATURAL HERITAGE FEATURES ON THE SITE AND ON THE ADJACENT LANDS WILL BE MAINTAINED OR RESTORED, AND TO THE EXTENT POSSIBLE, IMPROVED.



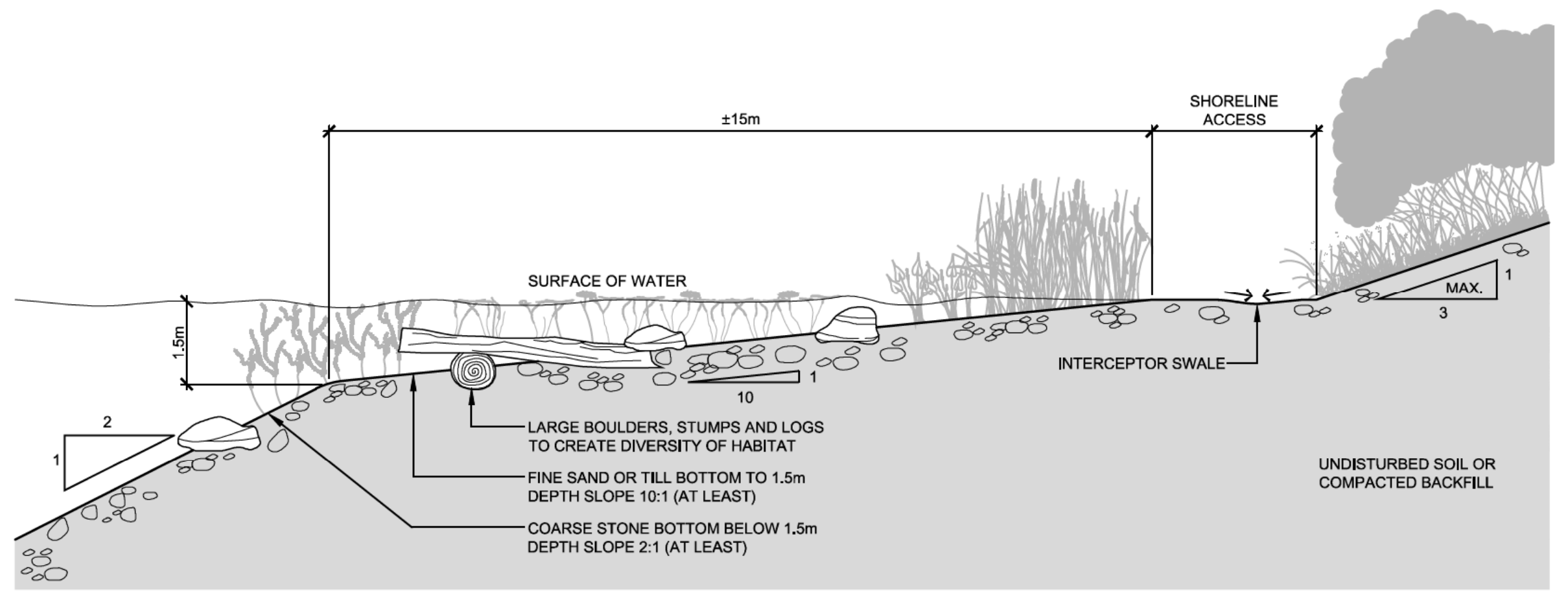
1/4 SHORELINE ALTERNATIVE DEEP SECTION

N.T.S.



2/4 SHORELINE HABITAT CREATION

N.T.S.



3/4 TYPICAL SHORELINE - WETLAND EDGE CONCESSION ROAD 4 PIT

N.T.S.

LEGEND

- BOUNDARY OF AREA TO BE LICENCED
- 150m INFORMATION BOUNDARY
- REGULATORY SETBACK
- 280.00 EXISTING 5m CONTOUR LINE
- 279.00 EXISTING 1m CONTOUR LINE
- 279.53 EXISTING SPOT ELEVATION
- EXISTING HYDRO POLES
- EXISTING FENCE
- EXISTING VEGETATION
- EXISTING WETLAND
- PROPOSED POND
- PROPOSED WETLAND
- PROPOSED VEGETATION
- DIRECTION OF SURFACE WATER DRAINAGE
- EXISTING BUILDING
- A LOCATION OF SECTION LINES
- 265 PROPOSED 5m CONTOUR LINE
- 264 PROPOSED 1m CONTOUR LINE

REHABILITATION NOTES
LICENCE #6538, #6613, #6662 AND # 625229

GENERAL INFORMATION

1. REFER TO DRAWING 3 OF 4 FOR SECTIONS, DRAWING 2 OF 4 FOR SCHEMATIC OPERATIONS, PHASING DIAGRAMS, AND NOTES AND DRAWING 4 OF 4 FOR FINAL REHABILITATION AND NOTES.

2. IN OCTOBER 2003 THE SUNDERLAND PIT SITE PLANS (LICENCE #6538, #6662 AND #6613) WERE REPRODUCED IN DIGITAL FORM (AUTOCAD) TO IMPROVE CLARITY AND FACILITATE PROPOSED REVISIONS.

3. THE LOCATION, SIZE AND DIRECTION OF REHABILITATION ACTIVITIES MAY VARY WITH THE EXTRACTION OPERATION. MAJOR CHANGES TO THE REHABILITATION SEQUENCE WILL REQUIRE WRITTEN APPROVAL OF MNRF.

4. PROPERTY SHALL BE REHABILITATED TO WILDLIFE HABITAT, INCLUDING OPEN FIELDS AND SLOPES, LAKES AND WETLANDS:

LICENCE # 625229	
OPEN SPACE	0.50 HECTARES
WETLAND/POND	0.68 HECTARES
TOTAL REHABILITATION	1.18 HECTARES
LICENCE #6538:	
DRY LAND	167.68 HECTARES
LAKE	30.50 HECTARES
WETLAND	4.82 HECTARES
TOTAL REHABILITATION	203.00 HECTARES
LICENCE #6662:	40.50 HECTARES
DRY LAND	40.50 HECTARES
TOTAL REHABILITATION	
LICENCE #6613:	
DRY LAND	61.15 HECTARES
LAKE	15.80 HECTARES
WETLAND	2.05 HECTARES
TOTAL REHABILITATION	79.00 HECTARES

TOTAL AREA TO BE REHABILITATED IS 323.68 HECTARES, WHICH INCLUDES 258.4 HECTARES OF LAND TO BE EXTRACTED.

REHABILITATION NOTES
LICENCE # 625229

THE FOLLOWING NOTES APPLY TO CONCESSION ROAD 4 PIT LICENCE # 625229 ONLY.

HYDROGEOLOGICAL INFORMATION

5. IT IS ANTICIPATED THAT THE GROUNDWATER ELEVATION ACROSS THE SITE WILL REMAIN RELATIVELY UNCHANGED AT ±265.0-268.5m A.S.L. (REFER TO HYDROGEOLOGICAL REPORT).

6. ALL SURFACE DRAINAGE WILL BE DIRECTED TO THE LOW AREAS REMAINING ON THE PIT FLOOR AND ON SITE POND SO THAT THE WATER CAN INFILTRATE INTO THE SOILS.

SIDESLOPES AND OPEN SPACE REHABILITATION INFORMATION

GRADING INFORMATION

7. REHABILITATED SLOPES WITHIN THE LICENCED AREA WILL BE CONSTRUCTED AS SHOWN ON THE CROSS SECTIONS AND DETAILS. REHABILITATION OF BELOW WATER SLOPES SHALL BE BY BACKFILLING USING ON SITE OVERBURDEN. ABOVE WATER SLOPES SHALL BE REHABILITATED BY BACKFILLING (3:1) AND/OR CUT AND FILL METHOD USING ON SITE OVERBURDEN TO RAISE THE GRADES FROM 1.5m ABOVE THE WATER TABLE.

8. AVAILABLE OVERBURDEN WILL BE USED FOR BACKFILLING BELOW WATER AND UP TO 1.5m ABOVE WATER.

TOPSOILING INFORMATION

9. ALL AVAILABLE TOPSOIL ON THE SITE WILL REMAIN AND BE USED FOR REHABILITATION OF THIS SITE (SEE SITE PLAN OVERRIDE NOTE #6). AVAILABLE TOPSOIL REPLACED WILL BE APPROXIMATELY 100-150mm THICK.

VEGETATION STABILIZATION INFORMATION

10. TOPSOIL SHALL BE SEEDED WITH A MIXTURE THAT MAY INCLUDE THE FOLLOWING AT A RATE OF APPROXIMATELY 125KG/HA:

BUCKWHEAT	RED CLOVER	WHITE CLOVER
TALL FESCUE	ANNUAL RYE	

OPEN WATER POND REHABILITATION INFORMATION

11. THE AVERAGE WATER LEVEL IN THE POST-EXTRACTION LAKE IS ESTIMATED TO BE ±267.00m ASL (BASED ON GOLDER ASSOCIATES LTD. DATA).

POND AND SHORELINE REHABILITATION INFORMATION

12. AREAS SHALL BE REHABILITATED TO WETLAND/ POND HABITAT AS FOLLOWS:
- UNDERWATER SLOPES AND UP TO 1.5m ABOVE THE WATER TABLE WILL BE FORMED WITH ON-SITE OVERBURDEN

13. RESTORATION OF THE NEARSHORE, SHALLOW WETLAND/ POND ZONE AS SHOWN ON THE TYPICAL SHORELINE/ WETLAND EDGE DETAIL (THIS SHEET), WILL GENERALLY BE ACCOMPLISHED AS FOLLOWS:
- EXTRACTION AND ROUGH GRADING WILL CREATE A NEARSHORE SHORELINE AREA AT A SLOPE OF 10:1.
- FINAL SLOPING OF THE SHORELINE TO CREATE PHYSICAL DIVERSITY BY SCALLOPING THE SHORELINE AND ADDING STRUCTURES.
- WOODY DEBRIS- BRANCHES, TREE TRUNKS, STUMPS, ETC. CLEARED IN THE EXTRACTION PROCESS WILL BE SALVAGED WHERE POSSIBLE, FOR USE IN SHORELINE RESTORATION/ UNDERWATER HABITAT ENHANCEMENT (REFER TO TYPICAL SHORELINE HABITAT DETAIL).
- STUMPS, LOGS, BRUSH BUNDLES, ETC. SHALL BE INSTALLED ALONG THE SHORELINE IN THE SHALLOW ZONE TO CREATE PHYSICAL DIVERSITY.
- OVERSIZE ROCKS NOT UTILIZED IN THE AGGREGATE OPERATIONS WILL ALSO BE PLACED IN THE SHALLOW ZONE TO CREATE PHYSICAL DIVERSITY.

14. PROPOSED SLOPE DESIGNATIONS SHOWN ON THESE PLANS USE STANDARD CONSTRUCTION DESCRIPTION OF HORIZONTAL DISTANCE TO VERTICAL DISTANCE. 3:1 WOULD BE 3m HORIZONTAL FOR EVERY 1m VERTICAL.

Ministry of Northern
Development, Mines, Natural
Resources and Forestry
APPROVED
Under the *Aggregate Resources Act*
Date: February 22, 2022

NO.	DATE	REVISIONS	OWNER	HM	MNR
5.	MAY14 2015	AS PER MNRF COMMENTS			
4.	MAR27 1995	AS PER MNR COMMENTS			
3.	JAN18 1995	AS PER MNR COMMENTS			
2.	NOV23 1993	AS PER MNR COMMENTS			
1.	JULY8 1991	TO INCLUDE LICENCE #740827 (6613)			

Pre Licence Review

NO.	DATE	REVISIONS	OWNER	HM	MNR
3.	JAN 2022	REVISED CONTOURS TO REFLECT ADDITIONAL SILT POND AREA		✓	
2.	OCT 2020	REVISED CONTOURS TO REFLECT 0m SETBACK ALONG EAST SIDE OF AREA SOUTH OF 2ND CONCESSION.		✓	
1.		REVISE BELOW WATER EXTRACTION AREAS, REVISE PHASING, ADDITION OF SOME PORTABLE STRUCTURES, AMALGAMATING THE OPERATION OF ALL LICENCES, AND THE SURRENDER OF THE LICENSED LANDS REQUIRED TO BUILD THE 4TH TO 5TH LINE BY–PASS, AND INCORPORATING PREVIOUS APPROVED AMENDMENTS.			

Site Plan Amendments

Harrington McAvan Ltd

41 Main Street, Unit 102
Unionville, Ontario L3R 2E5
Tel: 905-294-8282 Fax: 905-294-7623
www.harringtonmcavan.com

Project Name

ST MARYS

St. Marys Cement Inc. (Canada)
55 Industrial Street
Toronto, Ontario
M4G 3W9
(416) 423–1300

SUNDERLAND PIT

LICENCE 6538 LOTS 7, 8, 9 & 10; CONCESSION 2, 3 & 4
LICENCE 6613 LOTS 10 & 11; CONCESSION 3
LICENCE 6662 LOTS 8; CONCESSION 3
LICENCE NO 625229 CLOSED ROAD ALLOWANCE BETWEEN PART LOT 10; CONCESSION 3 AND PART LOT 10; CONCESSION 4,
TOWNSHIP OF BROCK
REGIONAL MUNICIPALITY OF DURHAM

Scale 1: 5000

0 50 100 150 200m

North

Stamp

RICHARD McAVAN
MEMBER

Drawing Status
SUBMITTED FOR REVIEW & APPROVAL

Drawn S.J.P.
Checked G.D.H.
Issue Date JAN 2022

Drawing Title
PROGRESSIVE/ FINAL REHABILITATION PLAN

Project Number
88-02

Drawing Number
4 OF 4

FILE NAME: 8802/COMBINEDSITEPLANS/COMP/8802–4.DWG
PLOT DATE: JANUARY 11, 2022