

LEGEND

- LICENSED AREA BOUNDARY
- LIMIT OF EXTRACTION
- LICENSED AREA BOUNDARY (LICENSE # 3670 - TEEDON PIT)
- LIMIT OF EXTRACTION (LICENSE #3670 - TEEDON PIT)
- INTERNAL ROAD
- CROSS-SECTION
- CONTOUR LINE
- ADDITIONAL LANDS OWNED BY CRH CANADA GROUP INC.
- LIMIT OF 120m INFORMATION ZONE
- EXISTING FENCE
- LOT LINE
- EXISTING TRAIL

RU (RURAL) ZONING

- EXISTING VEGETATION
- EXISTING ENTRANCE/EXIT TO PIT
- BOREHOLE
- MONITORING WELL
- DIRECTION OF SURFACE DRAINAGE
- POND

All distances on this plan are shown in metres unless otherwise stated.

Site Plan Amendments

No.	Date	Description	By
1			
2			
3			

- THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENCE, CATEGORY 3.
- PROPERTY BOUNDARY INFORMATION OBTAINED FROM VARIOUS SOURCES AND FILES FROM THE LAND REGISTRY OFFICE FOR THE COUNTY OF SIMCOE.
- TOPOGRAPHIC INFORMATION OBTAINED FROM NORTHWAY PHOTOMAP INC. AERIAL PHOTOGRAPHY DATED APRIL 2008.
- ZONING INFORMATION OBTAINED FROM THE TOWNSHIP OF TINY ZONING BY-LAW 06-001 CONSOLIDATED JULY 19, 2018.
- LAND USE INFORMATION COMPILED FROM SITE INSPECTIONS IN 2018.
- AREA TO BE LICENSED: 15.3 HA
- AREA TO BE EXTRACTED: 13.5 HA
- THE ELEVATION OF THE ESTABLISHED WATER TABLE IS OBTAINED FROM GHD HYDROGEOLOGICAL ASSESSMENT DATED DECEMBER 2018. THE FINAL DEPTH OF EXTRACTION WILL BE A MAXIMUM OF 1.5m ABOVE THE ESTABLISHED WATER TABLE. NO EXTRACTION WILL OCCUR BELOW THE WATER TABLE.
- REFER TO SHEET 4 OF 4 FOR CROSS-SECTIONS.

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
 113 COLLIER STREET BARRIE, ON L4M 1H2 | P: 705 728 0045 F: 705 728 2010 | WWW.MHBCPLAN.COM

MNRF Approval Stamp

Stamp

TEEDON PIT EXTENSION
 2 Darby Road, Tiny, ON L0K 2E1
 North 1/2 of Lot 80, Concession 1, W.P.R. &
 Part of original road allowance between lots 80 & 81, Concession 1, W.P.R.,
 Geographic Township of Tiny, County of Simcoe

CEDARHURST QUARRIES & CRUSHING LIMITED
 C/O CRH CANADA GROUP INC.
 2300 Steeles Avenue W. Suite 400
 Concord, Ontario L4K 5X6

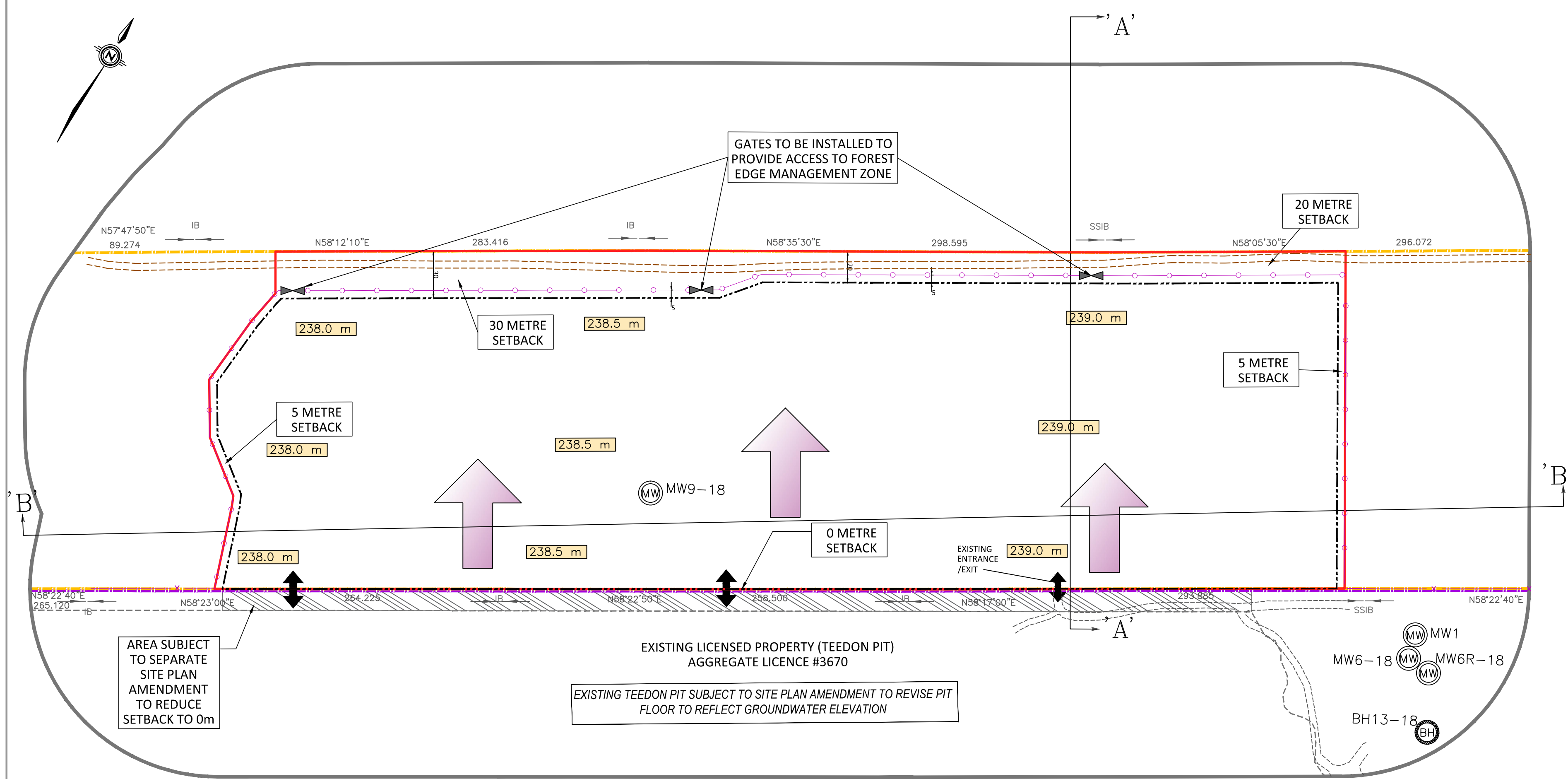
Project: **TEEDON PIT EXTENSION**

Drawn By: L.H. File No: **9061CZ**
 Checked By: B.Z. Date: January 2019

File Name: **EXISTING FEATURES**

Drawing No. **1 OF 4**

N:\0061CZ - Teedon Pit Extension\Drawings\ARA Site Plans\2019 - January



SITE AREA CALCULATIONS
 1. AREA TO BE LICENSED: 15.3 HA
 2. AREA TO BE EXTRACTED: 13.5 HA

MAXIMUM TONNAGE OF MATERIAL TO BE REMOVED FROM THE LICENSED PROPERTY
 3. THE MAXIMUM ANNUAL TONNAGE TO BE REMOVED FROM THIS SITE IS 600,000 TONNES PER ANNUM IN COMBINATION WITH THE ADJACENT TEEDON PIT (LICENCE #3670).

HOURS OF OPERATION
 4. THE HOURS OF OPERATION SHALL BE:
 A) SHIPPING - MONDAY TO FRIDAY 5AM TO 7PM AND SATURDAY 5AM TO 4PM
 B) SITE PREPARATION, EXTRACTION, PROCESSING, AND REHABILITATION - MONDAY TO FRIDAY 7AM TO 7PM
 C) EXTRACTION AND PROCESSING - SATURDAY 9AM TO 4PM
 D) THERE WILL BE NO OPERATIONS ON SUNDAYS OR STATUTORY HOLIDAYS
 E) MAINTENANCE/ SERVICING EQUIPMENT - NO RESTRICTIONS

LICENSED AREA BOUNDARY - FENCING
 5. PRIOR TO THE INSTALLATION OF FENCING TREE CLEARING SHALL OCCUR ALONG THE BOUNDARY OF THE SITE IN ACCORDANCE WITH THE TREE REMOVAL NOTES ON THIS PAGE.

TREE REMOVAL
 7. WITHIN THREE (3) YEARS OF LICENCE ISSUANCE AND PRIOR TO EXTRACTION COMMENCING THE FOLLOWING 20m WIDE STRIP OF TREES SHALL BE REMOVED TO PRE-STRESS THE NEW FOREST EDGE THAT WILL BE CREATED:
 A) TREES 5m BEYOND THE EXTRACTION AREA (E.G. WITHIN SETBACK AREA) SHALL BE CLEARED OF TREES (BUT NOT GRUBBED). PRIOR TO TREE CLEARING IN THE NORTH SETBACK AREA A QUALIFIED ECOLOGIST OR FORESTER SHALL WALK THE ALIGNMENT OF THE PROPOSED FENCE LOCATED 5m NORTH OF THE EXTRACTION LIMIT AND MARK TREES THAT SHOULD BE REMOVED TO ACCOMMODATE THE INSTALLATION OF THE FENCE. TREES TO BE CUT SHALL BE MARKED WITH YELLOW OR ORANGE MARKING PAINT. TREES ALONG THE FENCE ALIGNMENT SHOULD BE FELLED TOWARDS THE EXTRACTION AREA. ALSO SEE NOTE 41, THIS PAGE, FOR EROSION/SEDIMENT CONTROL.
 B) WITHIN THE EXTRACTION AREA A 15m WIDE AREA OF TREES ALONG THE WEST, NORTH AND EAST LIMITS OF EXTRACTION SHALL BE REMOVED.

8. ALL REMAINING TREES WITHIN THE EXTRACTION AREA WILL BE GRADUALLY CUT / CLEARED AHEAD OF EXTRACTIVE OPERATIONS. TREE CLEARING SHALL OCCUR AS REQUIRED TO ADVANCE EXTRACTION AND MINIMIZE THE DISTURBED AREA.

9. TREE CUTTING IN TREE CLEARING ZONE '1' SHALL OCCUR BETWEEN NOVEMBER 1ST AND MARCH 31ST INCLUSIVE.

10. TREE CUTTING IN TREE CLEARING ZONE '2' SHALL OCCUR BETWEEN NOVEMBER 1ST AND JANUARY 31ST INCLUSIVE.

11. SUITABLE TREES WILL BE HARVESTED FOR SAW LOGS AND OR FUEL WOOD. STUMPS AND OTHER WOOD REFUSE (WASTE WOOD, LIMBS & BRUSH) MAY BE USED FOR PIT REHABILITATION PURPOSES, REMOVED FROM THE SITE OR PILED ON THE SITE TO BE CHIPPED OR BURIED IN THE SIDE SLOPE.

12. SEE TREE CLEARING SCHEMATIC, THIS PAGE FOR TREE REMOVAL LOCATIONS TO PRE-STRESS THE NEW FOREST EDGE AND TIMING RESTRICTIONS.

FOREST EDGE MANAGEMENT
 13. FOLLOWING TREE CUTTING ALONG THE BOUNDARY OF THE SITE, A QUALIFIED ECOLOGIST OR FORESTER WILL WALK THE NEW FOREST EDGE AND MARK DEFECTIVE TREES FOR REMOVAL. TREES TO BE CUT SHALL BE MARKED WITH YELLOW OR ORANGE MARKING PAINT.

14. FOLLOWING TREE CUTTING ALONG THE BOUNDARY OF THE SITE A FOREST EDGE MANAGEMENT PLAN SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE FOREST EDGE MANAGEMENT SCHEMATIC THIS PAGE.

15. FOLLOWING COMPLETION OF THE FOREST EDGE MANAGEMENT PLAN A QUALIFIED ECOLOGIST OR FORESTER SHALL PREPARE A REPORT DOCUMENTING THE IMPLEMENTATION OF THE FOREST EDGE MANAGEMENT PLAN. THE REPORT SHALL BE SUBMITTED TO THE MINISTRY OF NATURAL RESOURCES AND FORESTRY (MNR).

STRIPPING OF TOPSOIL / OVERBURDEN
 16. TOPSOIL AND OVERBURDEN SHALL BE STRIPPED AND STORED SEPARATELY. TOPSOIL AND OVERBURDEN MAY BE STORED IN STOCKPILES WITHIN THE AREA TO BE EXTRACTED TO A MAXIMUM HEIGHT OF 15m; OR TO COMPLETE PROGRESSIVE REHABILITATION.

ACCESS TO THE PIT
 17. ACCESS TO THE PIT WILL BE THROUGH THE ADJACENT TEEDON PIT (LICENCE #3670) FROM THE ENTRANCE ONTO DARBY ROAD. THE ENTRANCE TO DARBY ROAD SHALL BE GATED AND LOCKED WHEN THE PIT PROPERTIES ARE NOT IN USE.

18. EQUIPMENT AND TRUCKS MAY ACCESS THE SITE ALONG THE COMMON EXTRACTION BOUNDARY OF THE ADJACENT TEEDON PIT (LICENCE #3670).

19. AGGREGATE FROM THE PIT MAY ALSO BE TRANSFERRED TO THE ADJACENT TEEDON PIT (LICENCE #3670) FOR PROCESSING AND WASHING.

EXTRACTION
 20. THE ELEVATION OF THE ESTABLISHED WATERTABLE RANGES ON-SITE FROM +/- 236.5mASL TO +/- 237.5mASL. THE MAXIMUM DEPTH OF EXTRACTION IS TO REMAIN 1.5m ABOVE THE ESTABLISHED WATERTABLE BASED ON ON-GOING MONITORING.

21. DUE TO SIZE OF THE PIT AND THE DEPTH OF EXTRACTION THE PIT WILL BE EXCAVATED IN ONE PHASE.

22. EXTRACTION WILL ADVANCE GENERALLY IN A SOUTH TO NORTH DIRECTION FROM THE ADJACENT TEEDON PIT (LICENCE #3670).

23. THE PIT WILL BE EXTRACTED IN UP TO 5-6 LIFTS. SEE PAGE 4 OF 4. PIT FACES SHALL NOT EXCEED THE REGULATIONS DETERMINED BY THE MINISTRY OF LABOUR.

24. AS EXTRACTION PROCEEDS NORTH, FACE RIDGES ON EACH LIFT (APPROXIMATELY 10m IN HEIGHT) SHALL BE MAINTAINED AT THE EAST AND WEST LIMITS AND MAY BE REMOVED AS PART OF THE FINAL EXTRACTION OF EACH LIFT AFTER THE PROCESSING PLANT IS RELOCATED TO THE NEXT LOWER LIFT.

EQUIPMENT TO BE USED ON SITE AND NOISE / AIR MITIGATION
 25. GENERAL TYPES OF EQUIPMENT TO BE USED IN THE OPERATION OF THE PIT WILL INCLUDE BUT NOT BE LIMITED TO BULLDOZERS, EXCAVATORS, FRONT-END LOADERS, DUMP TRUCKS AND PORTABLE CRUSHING / SCREENING PLANTS AND CONVEYORS.

26. ANY CONSTRUCTION EQUIPMENT USED TO PREPARE THE SITE, SUCH AS DOZERS, MUST COMPLY WITH MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS PUBLICATION NPC-115.

27. THE PORTABLE CRUSHING PLANT IS TO BE SITUATED WITHIN 30m OF THE WESTERN WORKING FACE DURING THE FIRST LIFT, WHEN WITHIN 200m OF THE WESTERN LIMIT OF EXTRACTION, IN ORDER TO MAXIMIZE SOUND ATTENUATION.

28. IF REQUIRED, THE PORTABLE PROCESSING PLANT SHALL HAVE AN ENVIRONMENTAL COMPLIANCE APPROVAL FROM THE MINISTRY OF ENVIRONMENT CONSERVATION AND PARKS.

29. THE GEN SET TRAILER FOR THE PROCESSING PLANT NEEDS TO BE ORIENTATED WITH THE EXHAUST DISCHARGE POINTED AWAY FROM THE SENSITIVE RECEPTOR AT 80 DARBY ROAD (APPROXIMATELY DUE EAST).

30. BETWEEN THE HOURS OF 5:00 TO 7:00 AM ONLY SHIPPING IS PERMITTED AND MAY INCLUDE A MAXIMUM OF 15 HIGHWAYS TRUCKS PER HOUR (30 TRUCK TRIPS) AND A MAXIMUM OF 1 SHIPPING LOADER IN COMBINATION WITH THE EXISTING TEEDON PIT (LICENCE #3670).

31. BETWEEN THE HOURS OF 7:00AM AND 7:00PM HIGHWAY TRUCKS ARE LIMITED TO 20 TRUCKS PER HOUR (40 PASSES PER HOUR) IN COMBINATION WITH THE EXISTING TEEDON PIT (LICENCE #3670).

32. DUST SHALL BE MITIGATED ON-SITE.

33. WATER OR ANOTHER PROVINCIAALLY APPROVED DUST SUPPRESSANT WILL BE APPLIED TO INTERNAL HAUL ROADS AND PROCESSING AREAS AS OFTEN AS REQUIRED TO MITIGATE DUST.

34. PROCESSING EQUIPMENT WILL BE EQUIPPED WITH DUST SUPPRESSING OR COLLECTION DEVICES, WHERE THE EQUIPMENT CREATES DUST AND IS BEING OPERATED WITHIN 300m OF A SENSITIVE RECEPTOR.

35. THE OPERATOR SHALL RESPOND TO OBJECTIONS / CONCERNS FROM THE RESIDENTS OR THE MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS RELATING TO NOISE AND AIR QUALITY. IF DEEMED APPROPRIATE BY THE MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS FURTHER MITIGATION MEASURES AND MONITORING SHALL BE IMPLEMENTED.

FUEL HANDLING / STORAGE AND SERVICING
 37. FUEL STORAGE WILL BE IN ABOVE GROUND TANKS CERTIFIED IN ACCORDANCE WITH APPROVED STANDARDS. FUEL STORAGE WILL BE LOCATED PROXIMITY TO THE PROCESSING AREA. REFUELLING BY FUEL TRUCKS IS ALSO PERMITTED.

BUILDINGS / STRUCTURES
 38. NO BUILDINGS OR OTHER STRUCTURES (I.E. WEIGH SCALES) WILL BE PLACED ON THE LICENSED PROPERTY.

SCRAP
 39. NO SCRAP SHALL BE STORED ON SITE.

STOCKPILING OF AGGREGATE
 40. STOCKPILES OF AGGREGATE SHALL BE LOCATED ON THE ACTIVE PIT FLOOR. THE MAXIMUM HEIGHT OF AGGREGATE STOCKPILES IS 15m.

EROSION / SEDIMENT CONTROL
 41. SILT FENCING WILL BE INSTALLED 5m BEYOND THE WEST, NORTH AND EAST EXTRACTION LIMIT AND MAINTAINED WHILE TREE CLEARING IS OCCURRING.

WATER MONITORING
 42. MW1-09, MW8-18, MW10D-18, MW5-18 SHALL BE MONITORED QUARTERLY FOR WATER LEVELS. SEE LOCATION OF MONITORING WELLS ON MONITORING WELL SCHEMATIC THIS PAGE.

43. MW9-18 SHALL BE MONITORED QUARTERLY FOR WATER LEVELS UNTIL IT IS REMOVED FOR EXTRACTION.

44. EXTRACTION SHALL REMAIN 1.5 METRES ABOVE THE ESTABLISHED WATER TABLE. IN THE EVENT THE WATER LEVEL DATA INDICATES THE MAXIMUM DEPTH OF EXTRACTION IS LESS THAN 1.5 METRES ABOVE THE ESTABLISHED WATER TABLE, THE MAXIMUM DEPTH OF EXTRACTION SHALL BE ADJUSTED ACCORDINGLY TO MAINTAIN THE 1.5 METRE DEPTH.

45. THE OPERATOR SHALL MAINTAIN A RECORD OF THE MONITORING RESULTS TO VERIFY THAT EXTRACTION REMAINS 1.5m ABOVE THE ESTABLISHED WATER TABLE.

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

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

IMPORTED MATERIALS
 48. AGGREGATE MAY BE IMPORTED ONTO THE LICENSED PROPERTY FOR PROCESSING AND BLENDING WITH ON-SITE AGGREGATE.

49. CLEAN INERT FILL MAY BE IMPORTED TO FACILITATE THE ESTABLISHMENT OF 3:1 (HORIZONTAL-VERTICAL) SLOPES ON THE FINAL PIT FACES. SEE PAGE 4 OF 4. THE OPERATOR MUST ENSURE THAT THE MATERIAL IS TESTED AT THE SOURCE, BEFORE IT IS DEPOSITED ON SITE, TO ENSURE THAT THE MATERIAL MEETS THE MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS' CRITERIA UNDER TABLE 1 OF THE MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS' SOILS, GROUND WATER AND SEDIMENT STANDARDS FOR USE UNDER PART XV.1 OF THE ENVIRONMENTAL PROTECTION ACT. SAMPLING RESULTS WILL BE PROVIDED TO THE MINISTRY OF NATURAL RESOURCES AND FORESTRY OR THE MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS UPON REQUEST.

50. NOTWITHSTANDING THE ABOVE, WHERE THE IMPORTED MATERIAL IS NOT BEING PLACED WITHIN 1.5 METERS OF THE SURFACE, THE CRITERIA UNDER TABLE 1 FOR SODIUM ABSORPTION RATIO AND ELECTRICAL CONDUCTIVITY DO NOT HAVE TO BE MET.

SPILLS RESPONSE PLAN
 51. ALL EMPLOYEES AND CONTRACTORS MUST OBEY THE FOLLOWING INSTRUCTIONS WHEN HANDLING POTENTIAL CONTAMINANTS ON THE LICENSED PROPERTY.

52. ALL EMPLOYEES AND CONTRACTORS HANDLING FUEL AND / OR POTENTIAL CONTAMINANTS WILL BE INSTRUCTED AS TO THE PROPER SAFE HANDLING OF SUCH FUELS / CONTAMINANTS.

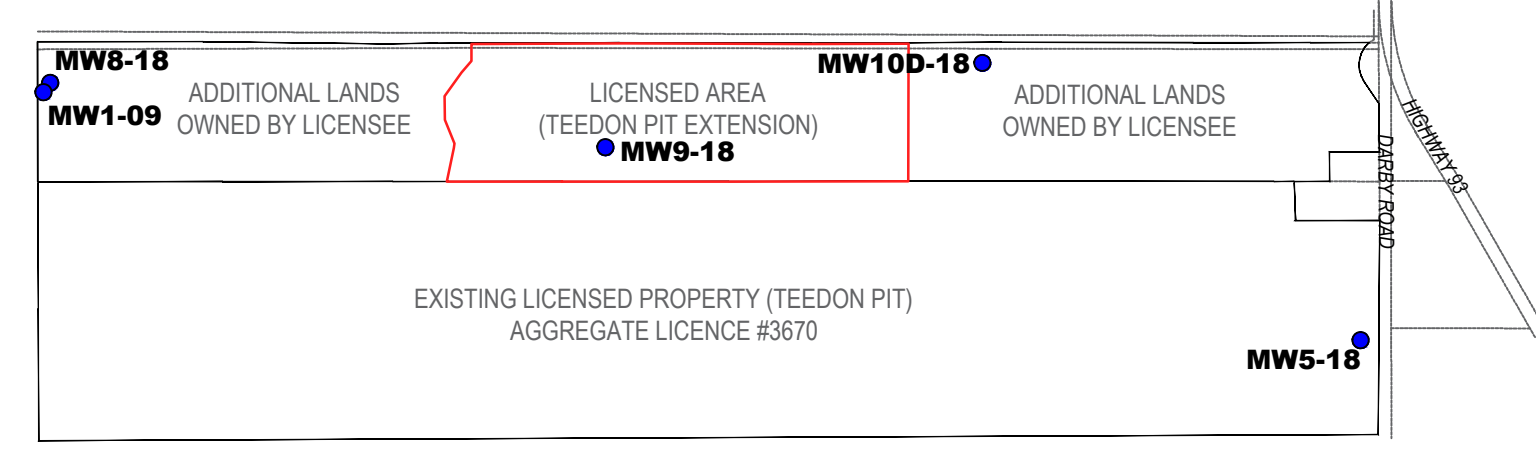
53. POTENTIAL CONTAMINANTS, I.E. FUEL, WILL BE STORED AND HANDLED AS REQUIRED BY PROVINCIAL LEGISLATION.

54. ALL REPORTABLE SPILLS OR RELEASE OF CONTAMINANTS MUST BE CLEANED UP IMMEDIATELY AND TRANSPORTED TO AN APPROVED WASTE DISPOSAL SITE BY A LICENSED HAULER. ANY SPILL MUST BE IMMEDIATELY CONTAINED TO PREVENT FURTHER SPREAD (I.E. EXCAVATE AND CONTAIN OIL SOAKED MATERIAL IN A LOADER BUCKET UNTIL DISPOSAL CAN BE ARRANGED).

55. ALL SPILLS OR RELEASE OF CONTAMINANTS MUST BE IMMEDIATELY REPORTED TO THE MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS SPILLS ACTION CENTRE BY TELEPHONE AT 1-800-268-6060.

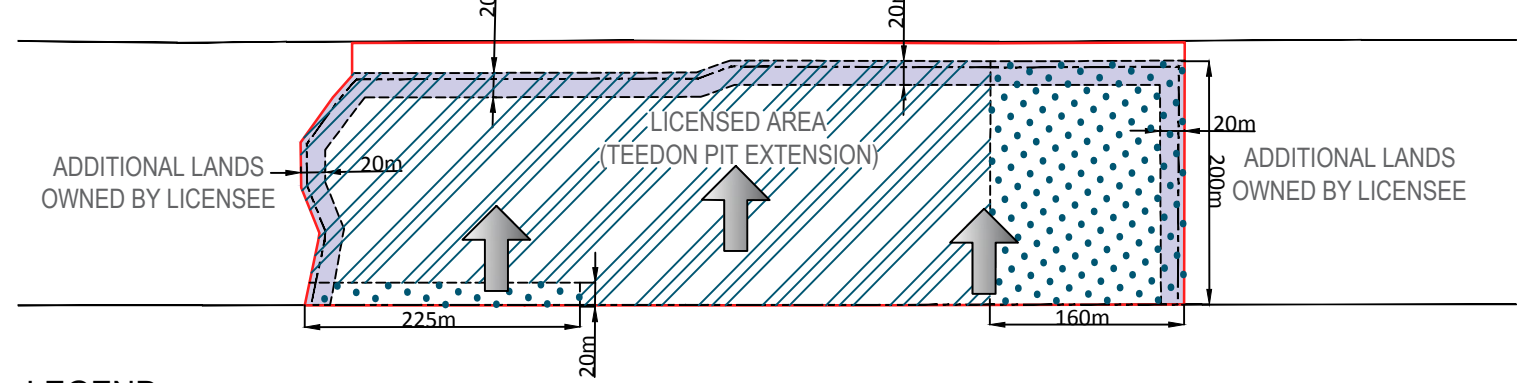
56. EMPLOYEES AND CONTRACTORS WORKING ON SITE WILL BE INFORMED OF THE SPILLS RESPONSE PLAN AND REQUIRED TO COMPLY WITH THESE REQUIREMENTS.

MONITORING WELL SCHEMATIC



LEGEND
 ● MONITORING WELL LOCATION

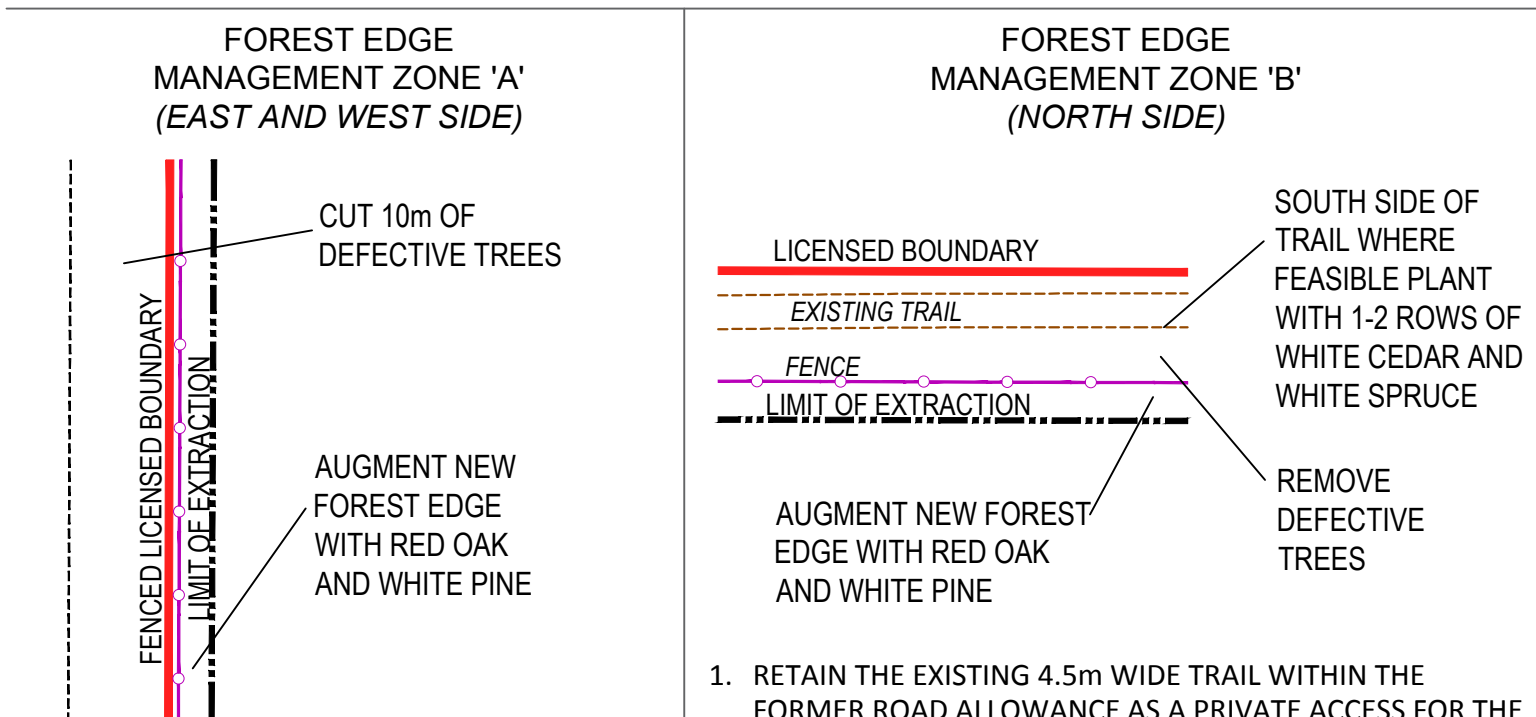
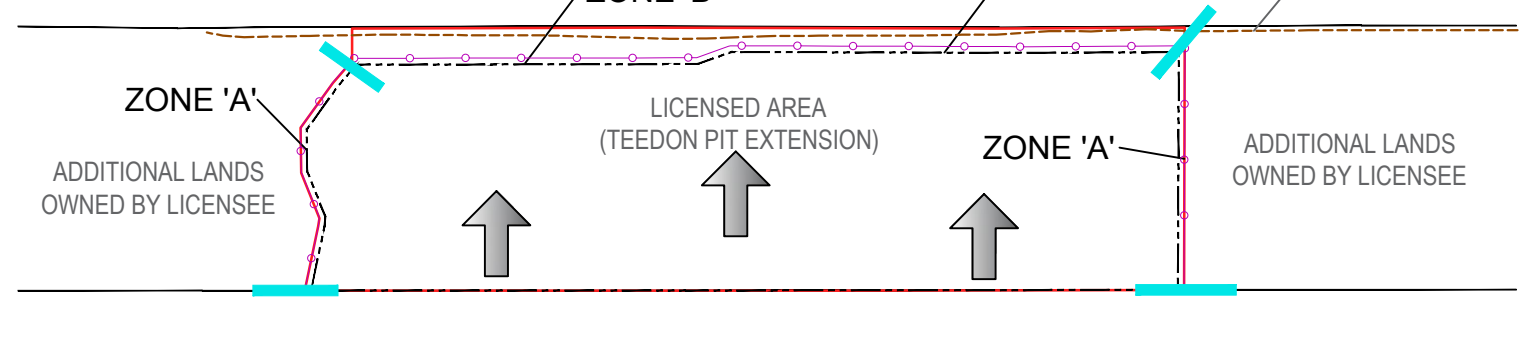
TREE CLEARING SCHEMATIC



LEGEND
 ■ TREE CLEARING WITHIN 3 YEARS OF LICENCE ISSUANCE - 20m (INCLUDES 5m OF SETBACK BEYOND EXTRACTION AREA AND 15m OF EXTRACTION AREA) SEE SCHEMATIC FOR LOCATION
 ■ TREE CLEARING ZONE '1' (NOV 1ST - JAN 31ST)
 ■ TREE CLEARING ZONE '2' (NOV 1ST - MAR 31ST)

- WITHIN THREE (3) YEARS OF LICENCE ISSUANCE, TREES 5m WITHIN THE EXTRACTION AREA SHALL BE CLEARED (BUT NOT GRUBBED).
- WITHIN THREE (3) YEARS OF LICENCE ISSUANCE, AN ADDITIONAL 15m WIDE AREA SHALL BE CLEARED OF TREES ALONG THE WEST, NORTH AND EAST EDGES OF THE EXTRACTION AREA.
- AS EXTRACTION PROGRESSES NORTH TREE CLEARING SHALL OCCUR AS REQUIRED TO ADVANCE EXTRACTION AND MINIMIZE THE DISTURBED AREA.

FOREST EDGE MANAGEMENT SCHEMATIC



- WITHIN 10m OF THE NEW FOREST EDGE MARK DEFECTIVE TREES FOR CUTTING. CUT UP STEMS/TRUNKS INTO 1 TO 2 METRE LENGTHS AND PLACE ON FOREST FLOOR. CUT UP TOPS INTO BRUSH PILES FOR WILDLIFE.
- IN THE 5m AREA BETWEEN THE FENCE AND THE EXTRACTION LIMIT THE NEW FOREST EDGE WILL BE AUGMENTED BY PLANTING RED OAK (67%) AND WHITE PINE (33%) IN GAPS. SPACING WILL VARY ACCORDING TO EDGE CONDITIONS AT THE TIME OF PLANTING, BUT SHALL BE AT LEAST 3m APART.
- TREE PLANTING WITHIN FOREST EDGE MANAGEMENT AREA SHALL BE 1 OR 2 GALLON CONTAINER STOCK.
- TREE PLANTING SHOULD OCCUR DURING THE SPRING PERIOD, I.E. APRIL OR EARLY MAY, DEPENDING ON SEASONAL CONDITIONS. IF NECESSARY, FALL PLANTING MAY OCCUR AFTER SEPTEMBER 20TH.
- RETAIN THE EXISTING 4.5m WIDE TRAIL WITHIN THE FORMER ROAD ALLOWANCE AS A PRIVATE ACCESS FOR THE OPERATOR TO IMPLEMENT FOREST EDGE MANAGEMENT.
- BETWEEN THE EXISTING TRAIL AND THE FENCE MARK DEFECTIVE TREES FOR CUTTING. CUT UP STEMS/TRUNKS INTO 1 TO 2 METRE LENGTHS AND PLACE ON FOREST FLOOR. CUT UP TOPS INTO BRUSH PILES FOR WILDLIFE OR, ALTERNATIVELY, CHIPPED AND PLACED ON THE 4.5m WIDE TRAIL.
- ALONG THE SOUTH SIDE OF TRAIL, WHERE FEASIBLE THE FORESTED AREA WILL BE AUGMENTED BY PLANTING ONE (1) OR TWO (2) ROWS OF WHITE CEDAR AND WHITE SPRUCE ON 2m SPACING OR GREATER.
- IN THE 5m AREA BETWEEN THE FENCE AND THE EXTRACTION LIMIT THE NEW FOREST EDGE WILL BE AUGMENTED BY PLANTING RED OAK (67%) AND WHITE PINE (33%) IN GAPS. SPACING WILL VARY ACCORDING TO EDGE CONDITIONS AT THE TIME OF PLANTING, BUT SHALL BE AT LEAST 3m APART.
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LEGEND

- LICENSED AREA BOUNDARY
- LIMIT OF EXTRACTION
- LICENSED AREA BOUNDARY (LICENCE #3670 - TEEDON PIT)
- LIMIT OF EXTRACTION (LICENCE #3670 - TEEDON PIT)
- INTERNAL ROAD
- CROSS-SECTION
- ADDITIONAL LANDS OWNED BY CRH CANADA GROUP INC.
- LIMIT OF 120m INFORMATION ZONE
- EXISTING FENCE
- PROPOSED 1.2m FENCE
- EXISTING TRAIL
- ENTRANCE/EXIT (Location may vary along common boundary)
- FINAL PIT FLOOR ELEVATION
- GENERAL DIRECTION OF EXTRACTION
- BOREHOLE
- MONITORING WELL
- GATE

SITE PLAN OVERRIDES

THE FOLLOWING CONDITIONS ILLUSTRATED ON THIS PLAN VARY FROM THE REQUIREMENTS OF THE PROVINCIAL STANDARDS THAT APPLY TO LICENSED PITS IN ONTARIO.

STANDARD	OVERRIDE DESCRIPTION
5.1	A PORTION OF THE LICENSED BOUNDARY IS NOT REQUIRED TO BE FENCED. SEE NOTES 5 & 6 THIS PAGE.
5.2	THE ENTRANCE ONTO THE LICENSED PROPERTY FROM THE TEEDON PIT PROPERTY (LICENCE #3670) WILL NOT BE GATED. THE ENTRANCE TO THE TEEDON PIT PROPERTY FROM DARBY ROAD IS GATED.
5.10	NO EXCAVATION SETBACK WILL EXIST ALONG THE SOUTH LICENSED BOUNDARY ADJACENT TO THE TEEDON PIT (LICENCE #3670). THE EXCAVATION SETBACK ALONG THE WEST AND EAST BOUNDARY IS 5m FROM THE LICENSED BOUNDARY.
5.13	OVERBURDEN, TOPSOIL AND AGGREGATE CAN BE STOCKPILED WITHIN 30m OF THE SOUTHERN BOUNDARY ADJACENT TO THE TEEDON PIT (LICENCE #3670). THE PORTABLE PROCESSING PLANT MAY BE LOCATED WITHIN 30m OF THE SOUTHERN BOUNDARY ADJACENT TO THE TEEDON PIT (LICENCE #3670).
5.16 / 5.17	TOPSOIL AND OVERBURDEN MAY BE MOVED BETWEEN THIS SITE AND THE ADJACENT TEEDON PIT (LICENCE #3670) TO PROVIDE TIMELY AND EFFECTIVE REHABILITATION OF BOTH PITS.
5.22	THE PORTABLE RESOURCES ACT SIGN FOR THE SITE WILL BE LOCATED AT THE DARBY ROAD ENTRANCE OF THE ADJACENT TEEDON PIT (LICENCE #3670) SINCE THE LICENSED BOUNDARY DOES NOT HAVE FRONTAGE ONTO ANY PUBLIC ROADS.

Site Plan Amendments

No.	Date	Description	By
1			
2			
3			

113 COLLIER STREET BARRIE, ON L4M 1H2 | P: 705 728 0045 F: 705 728 2010 | WWW.MHBCPLAN.COM

MNR Approval Stamp

Stamp

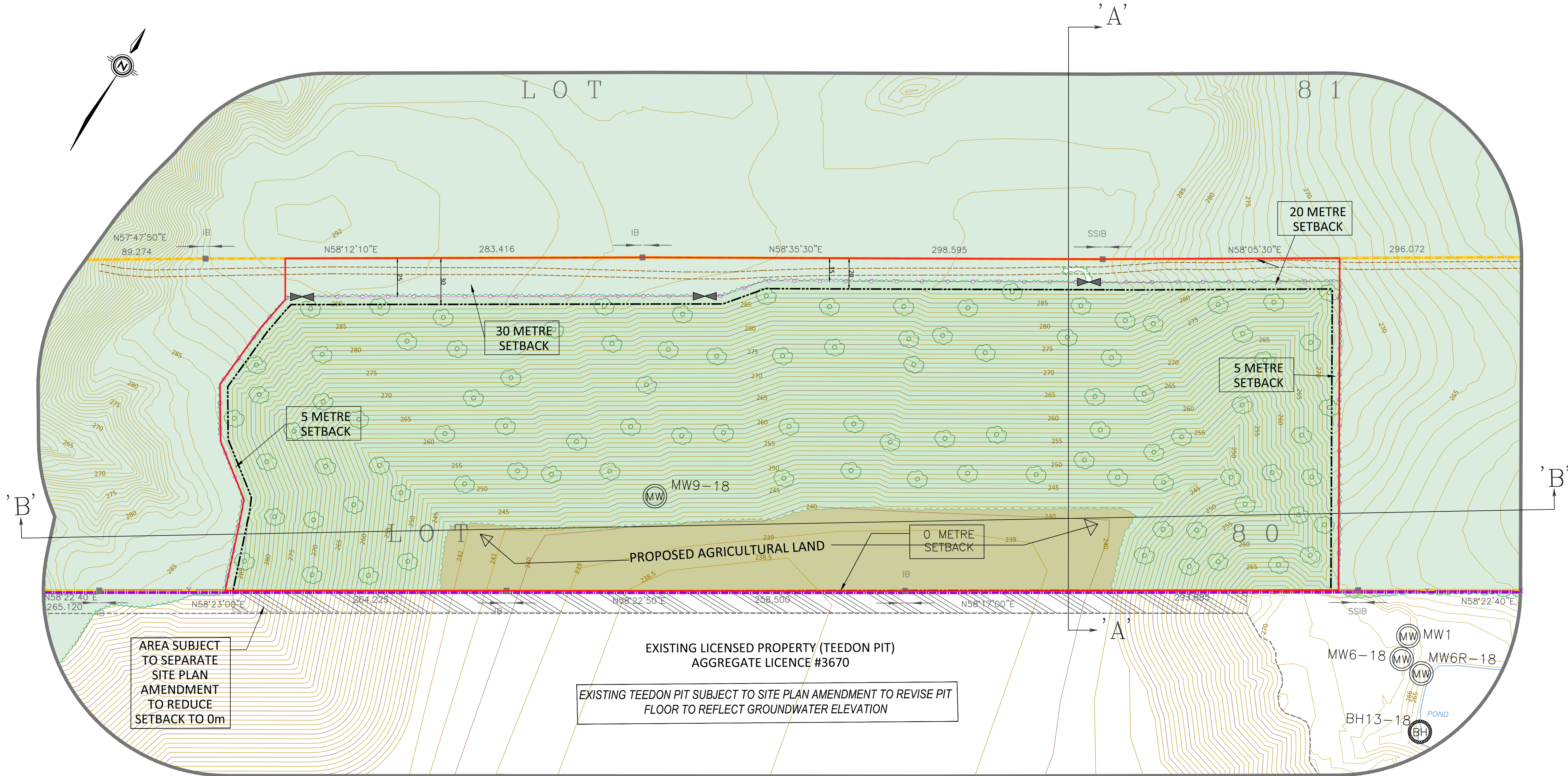
PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
MHBC

Project
TEEDON PIT EXTENSION
 2 Darby Road, Tiny, ON L0K 2E1
 North 1/2 of Lot 80, Concession 1, W.P.R.,
 Part of original road allowance between lots 80 & 81, Concession 1, W.P.R.,
 Geographic Township of Tiny, County of Simcoe

CEDARHURST QUARRIES & CRUSHING LIMITED
 C/O CRH CANADA GROUP INC.
 2300 Steeles Avenue W, Suite 400
 Concord, Ontario L4K 5X6

OPERATIONAL PLAN
2 OF 4

File Name: N:\0061CZ - Teedon Pit Extension\Drawings\ARA Site Plans\2019 - January



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- PROPOSED FORESTED AREA (SEE TREE PLANTING SCHEMATIC ON THIS PAGE)
- PROPOSED AGRICULTURAL LAND

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5.22	THE AGGREGATE RESOURCES ACT SIGN FOR THE SITE WILL BE LOCATED AT THE DARBY ROAD ENTRANCE OF THE ADJACENT TEEDON PIT (LICENCE # 3670) SINCE THE LICENSED BOUNDARY DOES NOT HAVE FRONTAGE ONTO ANY PUBLIC ROADS.

AREA SUBJECT TO SEPARATE SITE PLAN AMENDMENT TO REDUCE SETBACK TO 0m

EXISTING LICENSED PROPERTY (TEEDON PIT) AGGREGATE LICENCE #3670
EXISTING TEEDON PIT SUBJECT TO SITE PLAN AMENDMENT TO REVISE PIT FLOOR TO REFLECT GROUNDWATER ELEVATION

- AREA TO BE REHABILITATED: 14.0 HA (EXTRACTION AREA AND 5m OF EXTRACTION SETBACK).
 - THE ELEVATION OF THE ESTABLISHED WATER TABLE RANGES ON SITE FROM $\pm 236.5\text{mASL}$ TO $\pm 237.5\text{mASL}$.
 - PROGRESSIVE AND FINAL REHABILITATION OF THE DISTURBED AREA WILL BE COMPLETED AS EXTRACTION REACHES FINAL LIMITS AND DEPTHS.
 - FINAL PIT FACES WILL BE SLOPED AT 3:1 TO 5:1. FINAL SLOPES WILL BE CREATED USING A COMBINATION OF CUT & FILL AND/OR BACKFILLING. AVAILABLE OVERBURDEN AND TOPSOIL FROM ON SITE WILL BE APPLIED ON THE SLOPES AND FINAL PIT FLOOR. SEE PAGE 4 OF 4. CLEAN INERT FILL MAY ALSO BE IMPORTED FOR THE PURPOSES OF ESTABLISHING FINAL SLOPES IN ACCORDANCE WITH THE REQUIREMENTS ON PAGE 2 OF 4.
 - THE OBJECTIVE OF THE REHABILITATION PLAN IS TO REFOREST THE SETBACK AREAS AND THE SIDE SLOPES AND THE PIT FLOOR SHALL BE REHABILITATED TO AGRICULTURAL. SEE TREE PLANTING SCHEMATIC THIS PAGE FOR TREE PLANTING DETAILS.
 - THE PIT FLOOR SHALL BE GRADED AND CONTOURED AS SHOWN ON THIS PAGE AND TOPSOIL REAPPLIED AND PLANTED WITH SEED CONDUCTIVE TO FORM CROPLAND THEREAFTER.
 - THE SIDE SLOPE PLANTING AREAS SHALL BE MONITORED FOR SURVIVAL IN THE FIRST AND SECOND YEARS AFTER PLANTING. REPLACEMENT PLANTING SHOULD BE UNDERTAKEN IF SURVIVAL IS LESS THAN 60%. IF HERBACEOUS COMPETITION IS PREVENTING TREE GROWTH / TREE SURVIVAL, A TENDING TREATMENT MAY BE NECESSARY (E.G. HERBICIDE APPLICATION BY A LICENSED PESTICIDE APPLICATOR).
 - PRIOR TO SURRENDER OF THE LICENCE A QUALIFIED ECOLOGIST OR FORESTER SHALL PREPARE A REPORT DOCUMENTING:
 - THE IMPLEMENTATION OF THE REFORESTATION PLAN;
 - TO ASSESS THE NEED FOR ANY STAND THINNING TO PROMOTE FURTHER NATIVE HARDWOOD REGENERATION; AND
 - TO IDENTIFY OTHER MANAGEMENT OPPORTUNITIES IF APPROPRIATE.
- IF REQUIRED ANY FURTHER WORK SHALL BE COMPLETED PRIOR TO THE SURRENDER OF THE LICENCE. THE REPORT SHALL BE SUBMITTED TO THE MINISTRY OF NATURAL RESOURCES AND FORESTRY (MNR).

TREE PLANTING SCHEMATIC



- #### REFORESTATION OF 5m SETBACK
- A FEW YEARS PRIOR TO TREE PLANTING COMMENCING ON THE REHABILITATED SIDE SLOPES, A QUALIFIED ECOLOGIST WILL WALK THE 5m SETBACK AND ASSESS EXISTING TREE REGENERATION ESTABLISHED THROUGH THE FOREST EDGE MANAGEMENT PLAN.
 - EXISTING TREE REGENERATION WILL BE AUGMENTED BY PLANTING RED OAK (67%) AND WHITE PINE (33%) IN GAPS APPROXIMATELY 2m FROM THE FENCE.
 - TREE PLANTING SHALL BE 1 OR 2 GALLON CONTAINER STOCK.
 - TREE PLANTING SHOULD OCCUR DURING THE SPRING PERIOD, I.E. APRIL OR EARLY MAY, DEPENDING ON SEASONAL CONDITIONS. IF NECESSARY, FALL PLANTING MAY OCCUR AFTER SEPTEMBER 20.
 - SPACING OF TREES WILL VARY ACCORDING TO EXISTING REGENERATION, BUT SHALL BE AT LEAST 3m APART.

REFORESTATION OF SIDE SLOPES

- TREE PLANTING OF SIDE SLOPES SHALL NOT OCCUR UNTIL THE SLOPES HAVE BEEN SUCCESSFULLY STABILIZED AND RE-VEGETATED WITH HERBACEOUS COVER (GRASS AND LEGUME MIXTURE).
- SOME STUMPS, LOGS AND ROCK PILES SHALL BE INCORPORATED INTO SIDE SLOPES, TO PROVIDE SOME HABITAT STRUCTURE AND VARIABILITY.
- SINCE THE SOIL CONDITIONS ON THE REHABILITATION SLOPES WILL BE VARIABLE, A QUALIFIED ECOLOGIST OR FORESTER SHOULD EXAMINE THE SOIL CONDITIONS PRIOR TO TREE PLANTING AND THE SOIL WILL BE AMENDED AS RECOMMENDED BY A QUALIFIED ECOLOGIST OR FORESTER.
- CONIFERS ARE RECOMMENDED AS THE INITIAL PLANTINGS ON THE SIDE SLOPES DUE TO THEIR ABILITY TO GROW IN EXPOSED, HOT, DRY AND NUTRIENT-POOR ENVIRONMENTS. RED PINE AND JACK PINE ARE THE PREFERRED CONIFERS FOR THE INITIAL TREE PLANTING AT THE SITE. RED OAK AND WHITE PINE ARE SECONDARY SPECIES THAT WILL BE PLANTED. AFTER THE SECONDARY SPECIES ARE PLANTED THE SIDE SLOPES SHOULD CONTAIN APPROXIMATELY THE FOLLOWING PROPORTIONS OF TREES: RED PINE 45%, JACK PINE 35%, RED OAK 10% AND WHITE PINE 10%.
- WIDER-THAN-NORMAL TREE SPACING IS RECOMMENDED. A TARGET SPACING OF 2.4m BETWEEN ROWS AND 2.1 TO 2.4m WITHIN ROWS IS SUITABLE, WHICH TOTALS APPROXIMATELY 1,600 TO 1,900 TREES PER HECTARE.
- TREE PLANTING SHALL OCCUR DURING THE SPRING PERIOD, I.E. APRIL OR EARLY MAY DEPENDING ON SEASONAL CONDITIONS. IF NECESSARY, FALL PLANTING MAY OCCUR AFTER SEPTEMBER 20TH.
- LARGE BAREROOT STOCK SHALL BE USED AND PLANTING SHALL BE DEEP. FOR RED PINE AND JACK PINE 3-0 BAREROOT STOCK IS SUITABLE. TREES SHALL BE PLANTED DEEPER THAN THE NATURAL ROOT COLLAR BUT WITH THE FIRST WHORL OF BRANCHES SHOWING ABOVE GROUND. THE PLANTING MAY BE DONE BY HAND OR MACHINE, DEPENDING ON THE SIZE OF THE AREA TO BE PLANTED AND THE STONE CONTENT IN THE SOIL.

All distances on this plan are shown in metres unless otherwise stated.

Site Plan Amendments

No.	Date	Description	By
1			
2			
3			

MNRF Approval Stamp

Project
TEEDON PIT EXTENSION
2 Darby Road, Tiny, ON L0K 2E1
North 1/2 of Lot 80, Concession 1, W.P.R. & Part of original road allowance between lots 80 & 81, Concession 1, W.P.R., Geographic Township of Tiny, County of Simcoe

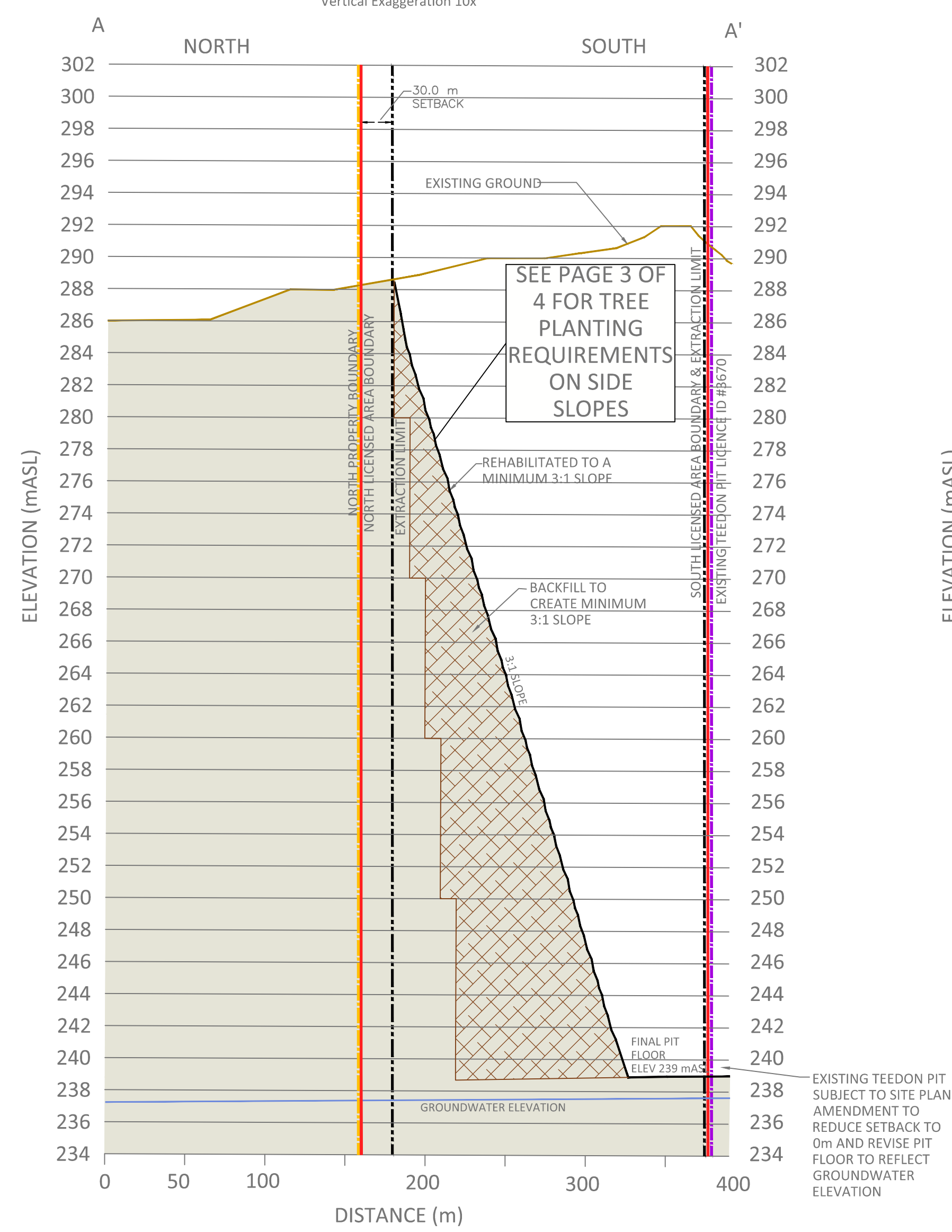
CEDARHURST QUARRIES & CRUSHING LIMITED
C/O CRH CANADA GROUP INC.
2300 Steeles Avenue W. Suite 400
Concord, Ontario L4K 5X6

Drawn By	L.H.	File No.	9061CZ
Checked By	B.Z.	Date	January 2019

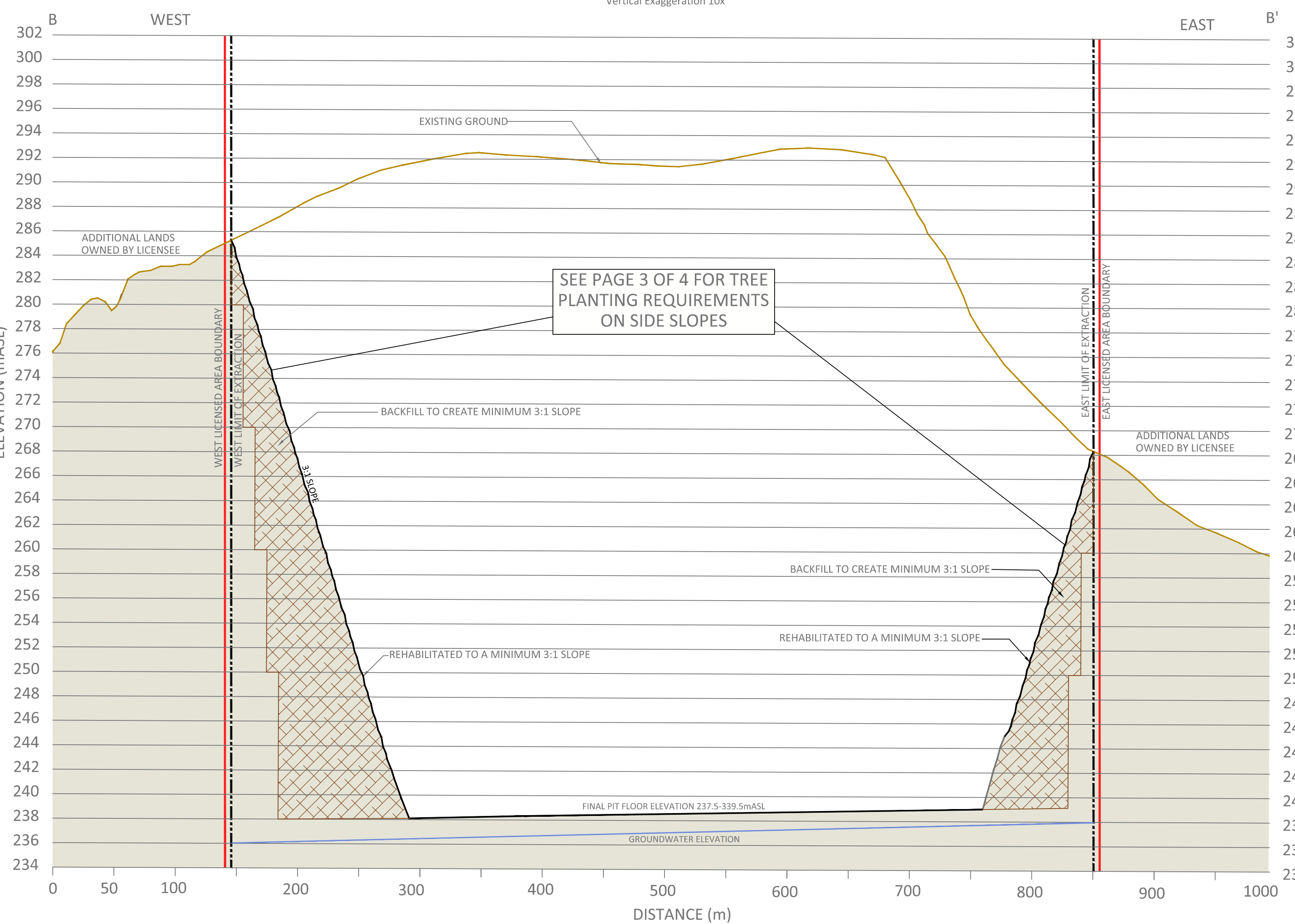
LEGEND

- LICENSED AREA BOUNDARY
- - - - LIMIT OF EXTRACTION
- LICENSED AREA BOUNDARY (LICENSE # 3670 - TEEDON PIT)
- ADDITIONAL LANDS OWNED BY CRH CANADA GROUP INC.
- AREA TO BE BACKFILLED

CROSS-SECTION A-A'
Vertical Exaggeration 10x



CROSS-SECTION B-B'
Vertical Exaggeration 10x



All distances on this plan are shown in metres unless otherwise stated.

Site Plan Amendments

No.	Date	Description	By
1			
2			
3			

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
113 COLLIER STREET BARRIE, ON L4M 1H2 | P: 705 728 0045 F: 705 728 2010 | WWW.MHBCPLAN.COM

MNRF Approval Stamp

Stamp

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