

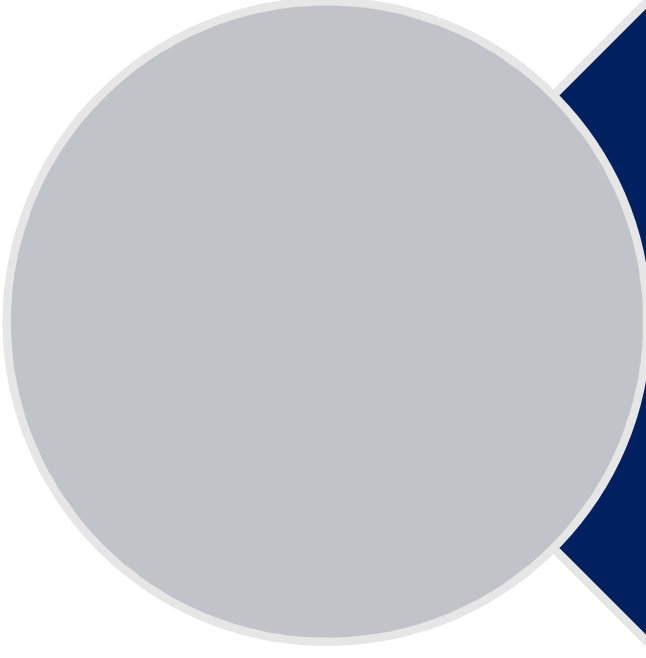
# **Welcome to the Teedon Pit Extension Aggregate Resources Act Public Meeting**

*All technical reports and information  
presented at the Community Liaison  
Committee are available online at:*

<https://www.dufferinaggregates.com/>

*Please refer to the Document Library under the Resource Centre tab.*

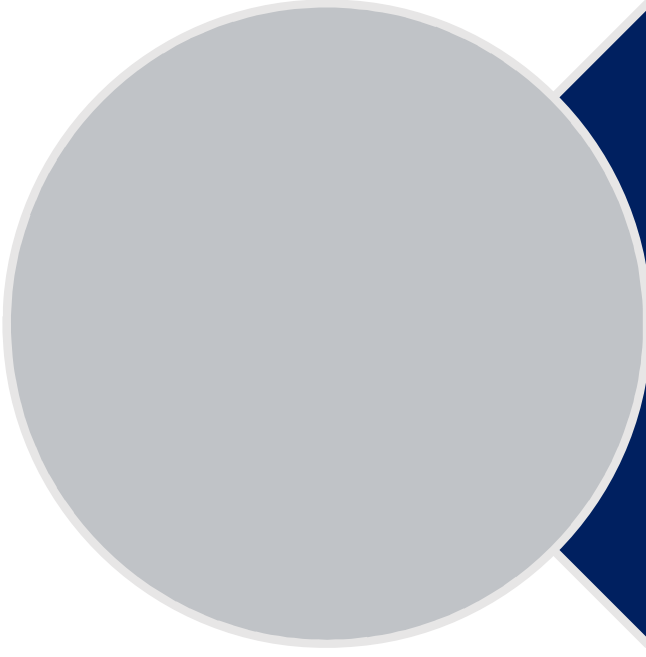
# CRH Canada Group Inc. & Dufferin Aggregates



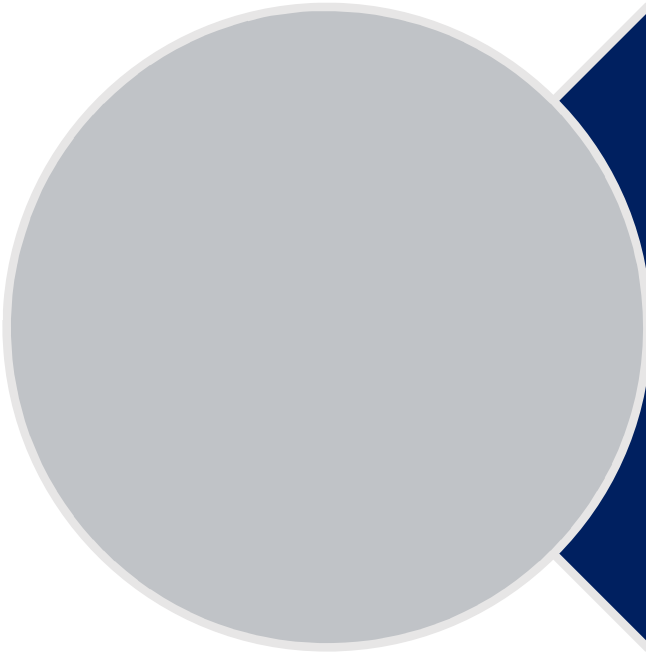
CRH Canada Group Inc. is one of the country's largest vertically integrated building materials and construction companies.



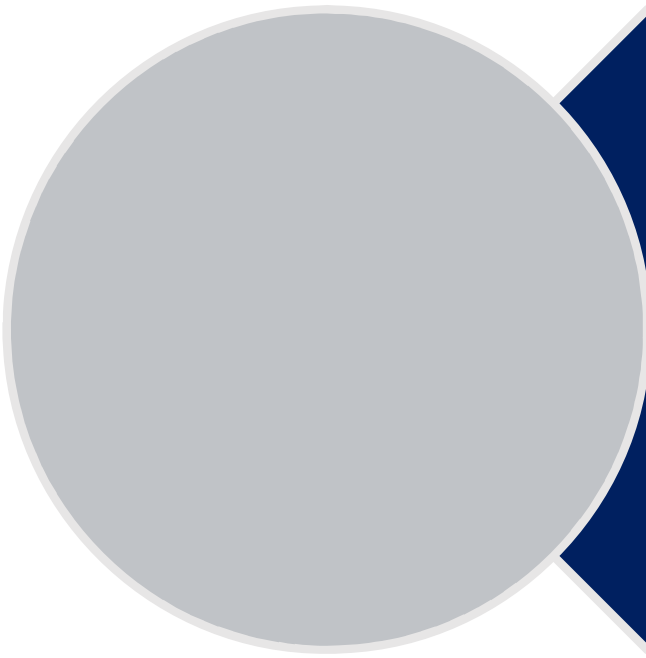
± 4,000 employees in Canada, of which ± 3,000 are in Ontario.



CRH manufactures cement, aggregates and ready mix concrete and provide construction services to many of Ontario's largest infrastructure projects.



CRH is a member of CRH plc, a global building materials company which employs more than 90,000 people in 31 countries around the world.



In 2017, CRH acquired the existing Teedon Pit and assumed responsibility of the proposed Teedon Pit Extension application on behalf of Cedarhurst Quarries and Crushing Limited.

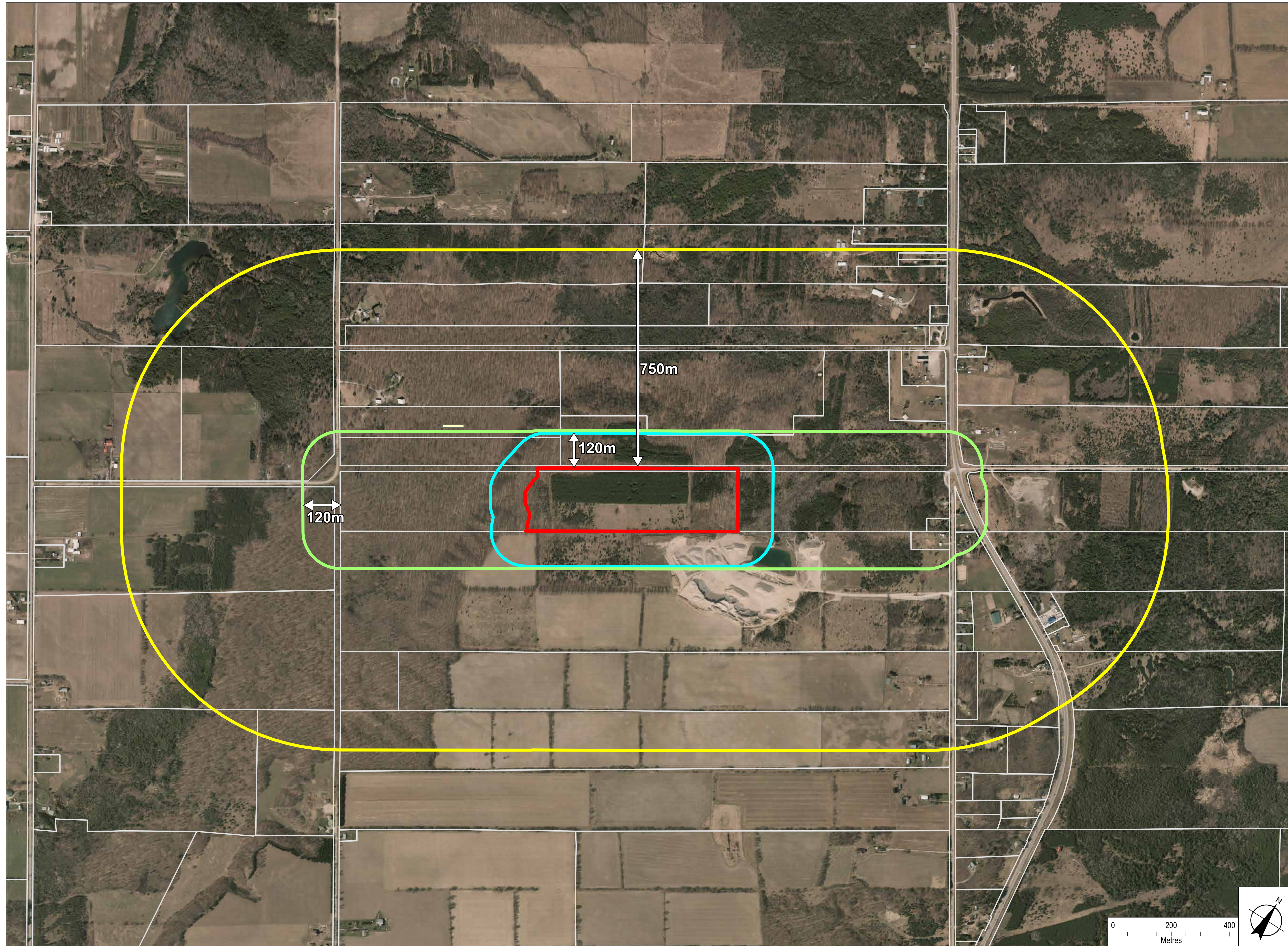


**CRH**


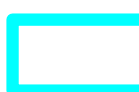
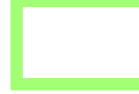



**Dufferin**  
Aggregates  
A division of CRH Canada Group Inc.

# NOTIFICATION OF AGGREGATE RESOURCES ACT APPLICATION



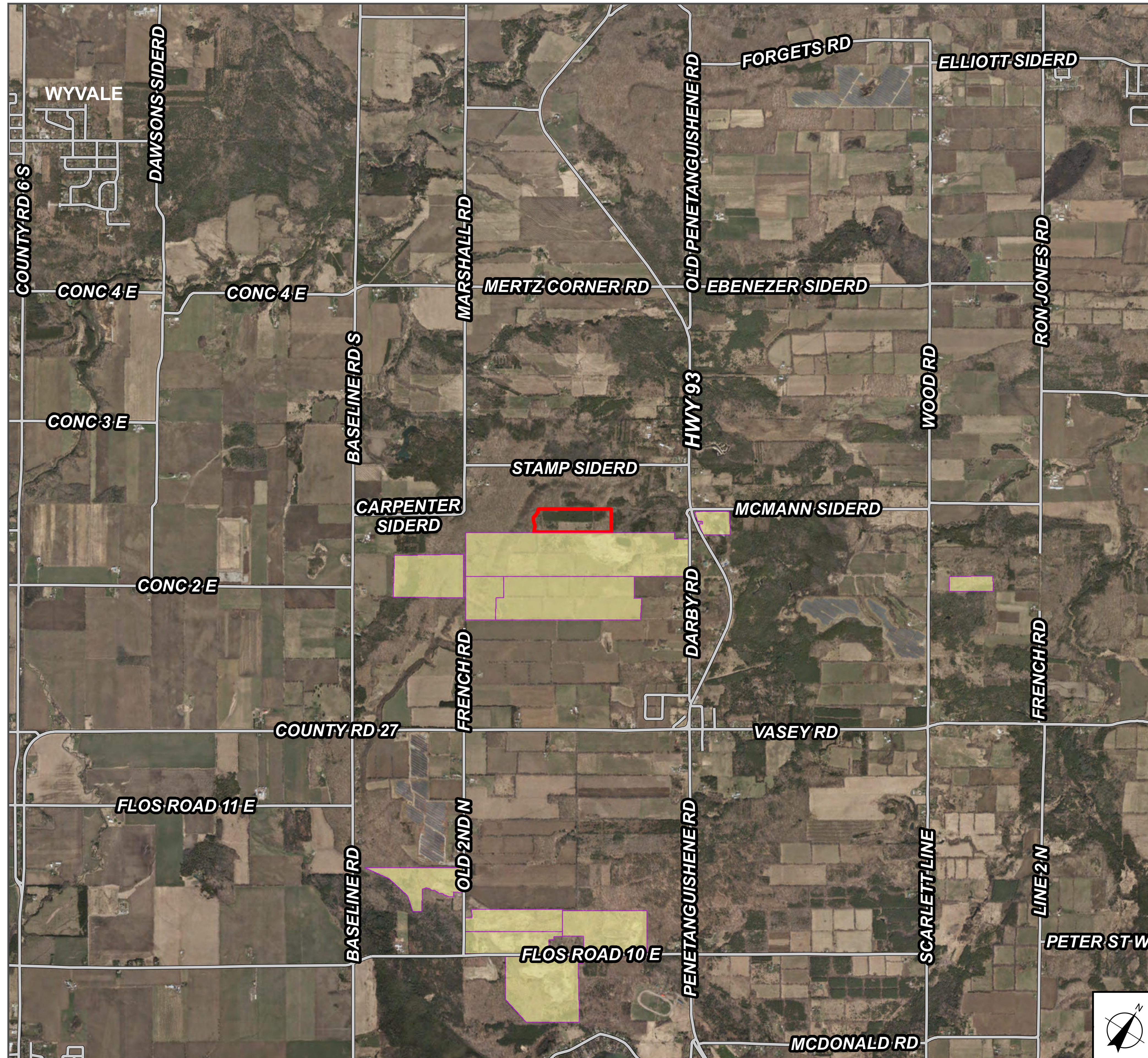
## Legend

-  Teedon Pit Extension - Proposed Licensed Boundary
-  Notification Required by Registered Mail
-  CRH Expanded the Notice by Registered Mail
-  CRH Voluntarily Provided Notice by Regular Mail


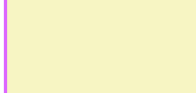
## IN ADDITION TO MAIL OUTS:

1. There is a sign posted at the site.
2. Notice was provided in the Midland Mirror and Le Goût de vivre.

# SITE LOCATION



## Legend

-  Licensed Boundary
-  Existing ARA Licensed Site

# Teedon Pit Extension Application Process

2011

Teedon Pit applications submitted to Township of Tiny and Ministry of Natural Resources and Forestry.

2012

Township of Tiny commissioned peer reviews for natural environment, noise and water resources reports.

2013

Revisions made to application to address agency comments.

2014

Natural environment and noise peer reviewers satisfied with revised application and new extraction footprint. Water resources peer reviewer satisfied with the new extraction footprint and confirmed that the 1.5 m buffer above the water table will serve to protect groundwater resources. The water resources peer reviewer also requested additional monitoring wells.

2018

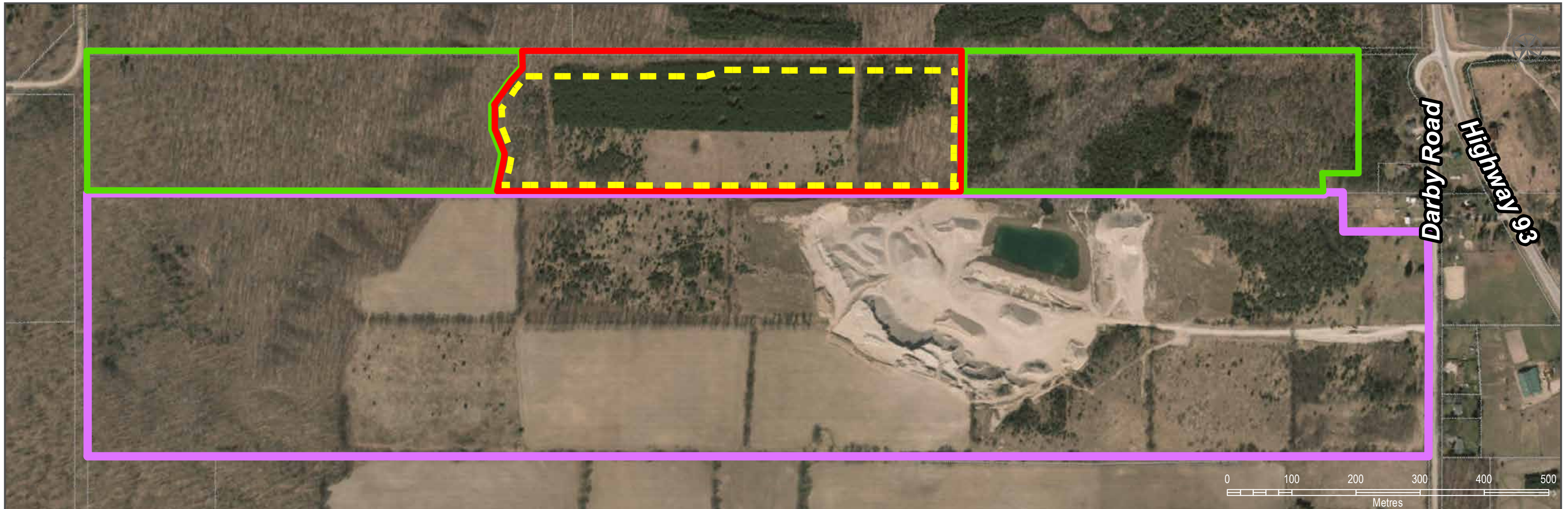
7 additional monitoring wells were installed at the Teedon Pit in 2018 to better characterize the subsurface hydrogeological conditions and to allow additional monitoring of the water table. Currently there are a total of 11 wells that are monitored on the Teedon Pit and Extension properties. Dufferin significantly reduced the proposed licensed area by 64% and extraction area by 65% from the original 2011 proposal.

2019

The County of Simcoe, Ministry of Natural Resources and Forestry and Township of Tiny (including their peer reviewers for water noise and natural environment) are in the process of reviewing the revised application with the 2018 footprint.

# HISTORY OF APPLICATION

## 2018 CURRENT PROPOSAL



## 2013 REVISED PROPOSAL



## 2011 ORIGINAL PROPOSAL



### Legend

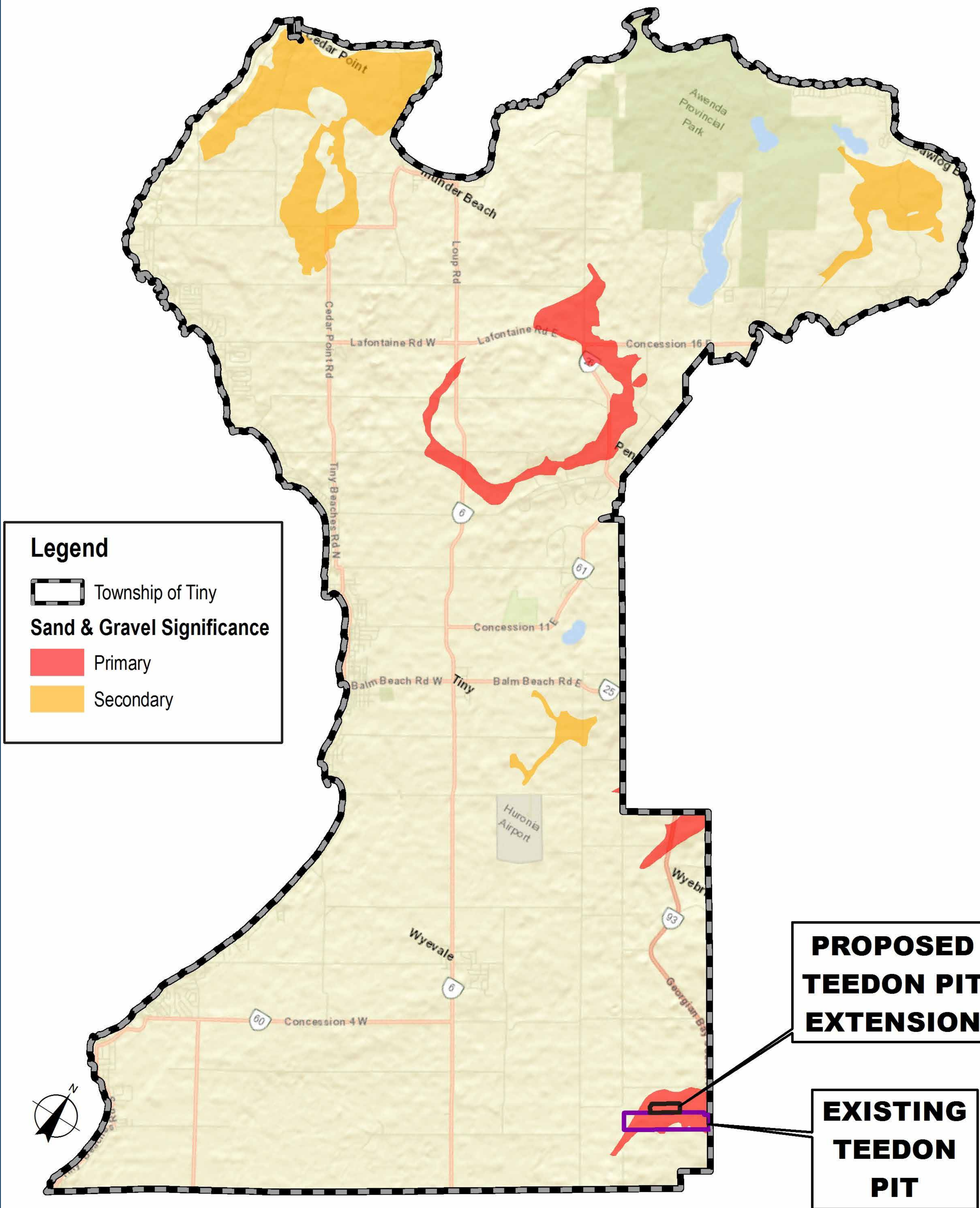
- EXISTING TEEDON PIT
- PROPOSED TEEDON PIT EXTENSION LICENSED BOUNDARY
- PROPOSED TEEDON PIT EXTENSION EXTRACTION AREA
- ADDITIONAL LANDS OWNED BY CRH - ENVIRONMENTAL BUFFER (NO EXTRACTION)

### SINCE 2011 APPLICATION:

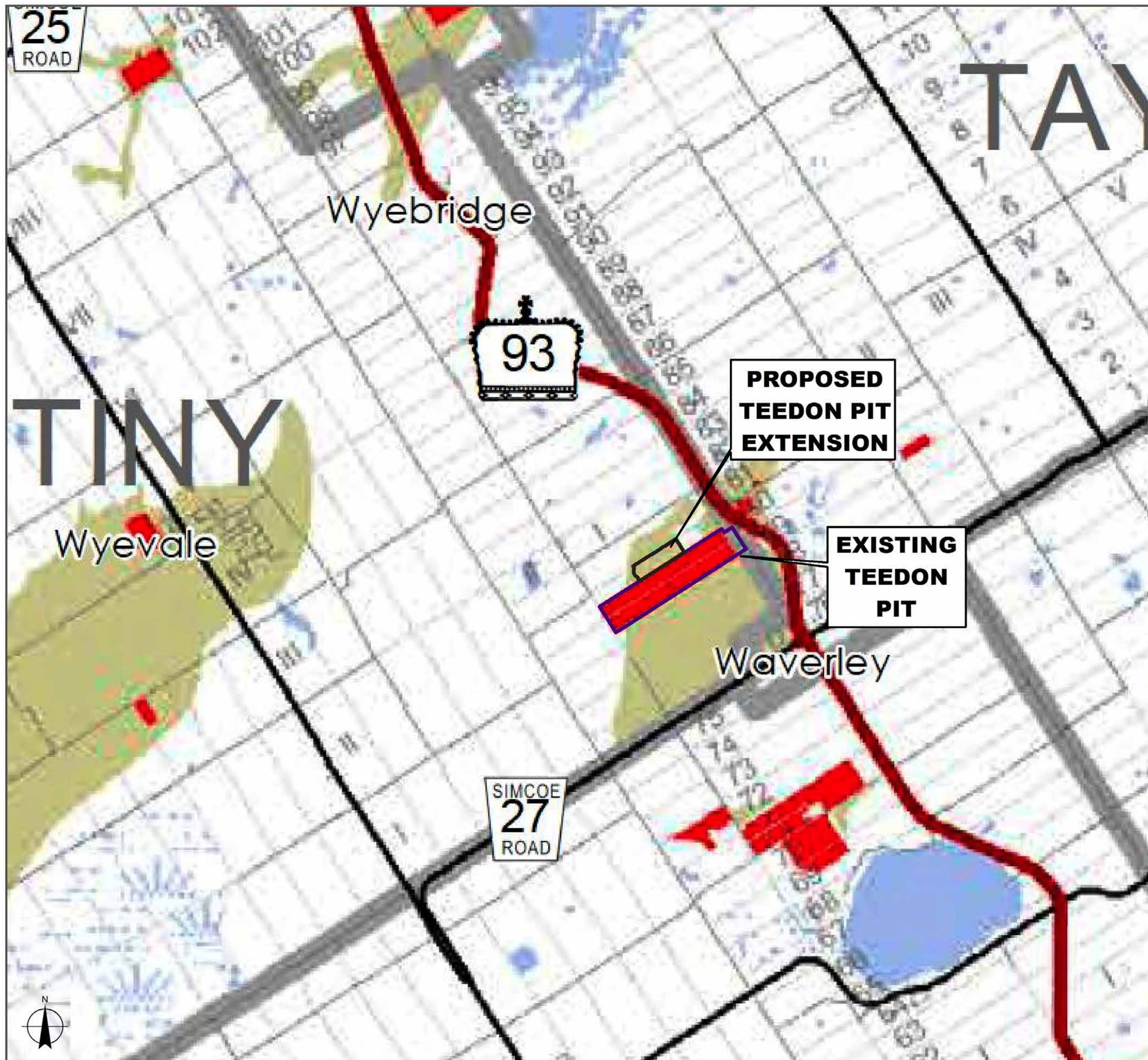
**64% REDUCTION IN LICENSED AREA**  
**65% REDUCTION IN EXTRACTION AREA**

	LICENSED AREA	EXTRACTION AREA
<b>2011</b>	42.6 ha	39.0 ha
<b>2013</b>	42.6 ha	30.0 ha
<b>2018</b>	15.3 ha	13.5 ha


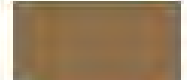
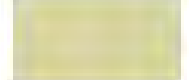
# PROVINCIAL SAND & GRAVEL RESOURCE MAPPING



# COUNTY OF SIMCOE HIGH POTENTIAL MINERAL AGGREGATE RESOURCES (SCHEDULE 5.2.1.)



## Legend

-  Licensed Pits and Quarries
-  Bedrock Aggregate Resources (Midhurst District)
-  Sand & Gravel Resources

## COUNTY OF SIMCOE OFFICIAL PLAN

High potential mineral aggregate resource areas shall be protected for potential long-term use. As much of the mineral aggregate resources as is realistically possible shall be made available as close to markets as possible. Demonstration of need for mineral aggregate resources, including any type of supply/demand analysis, shall not be required, notwithstanding the availability, designation or licensing for extraction of mineral aggregate resources locally or elsewhere. (Policy 4.4.2.)



# TOWNSHIP OF TINY OFFICIAL PLAN (2001) LAND USE



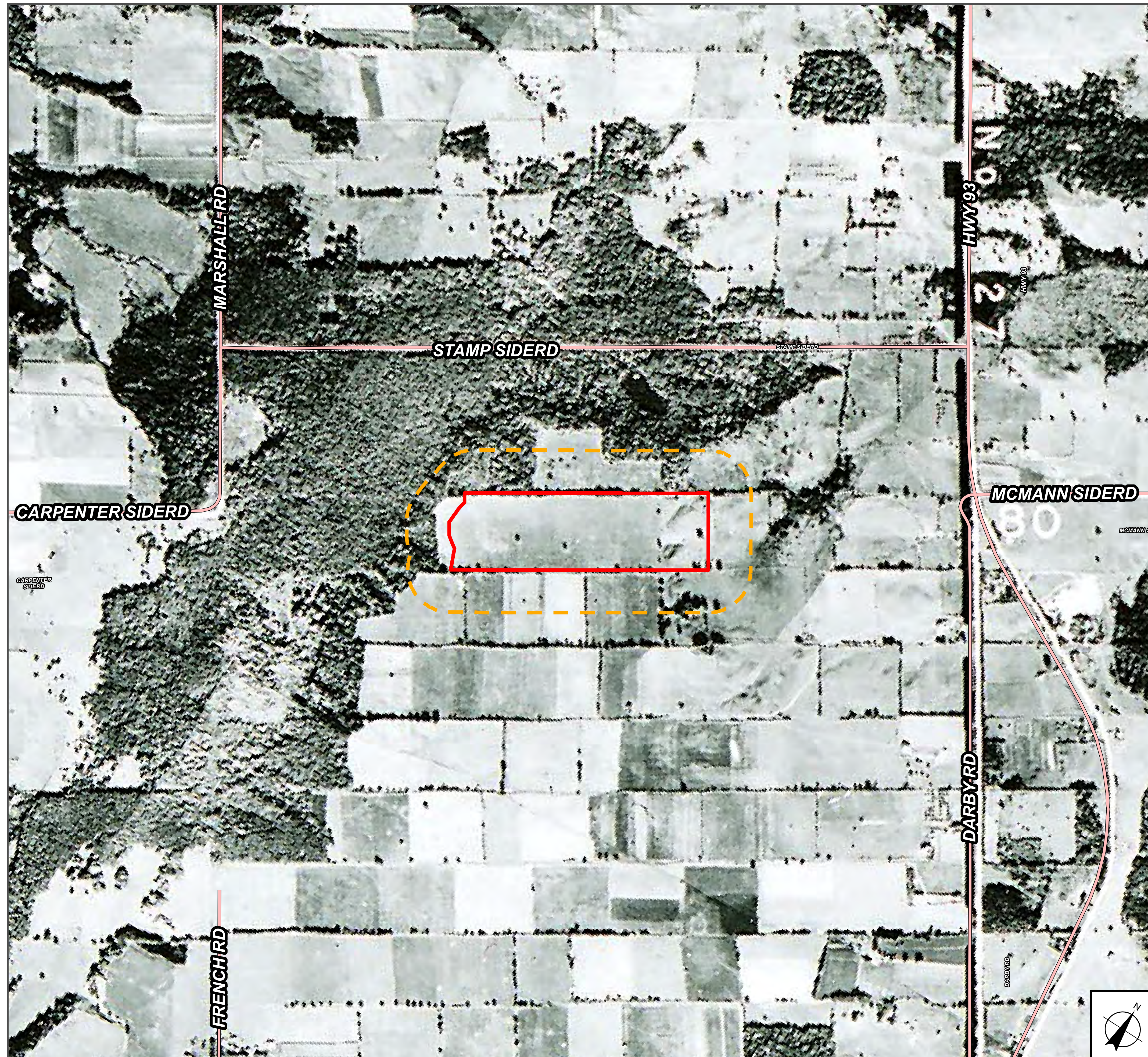
## Legend

- Mineral Aggregate Resources I
- Mineral Aggregate Resources II



## MINERAL AGGREGATE RESOURCES TWO

- To protect known mineral aggregate deposits and areas of potential mineral aggregate resources for future resource use.
- To ensure that new extractive activities are carried out with minimal environmental and social costs. (Policy B.14.1.)

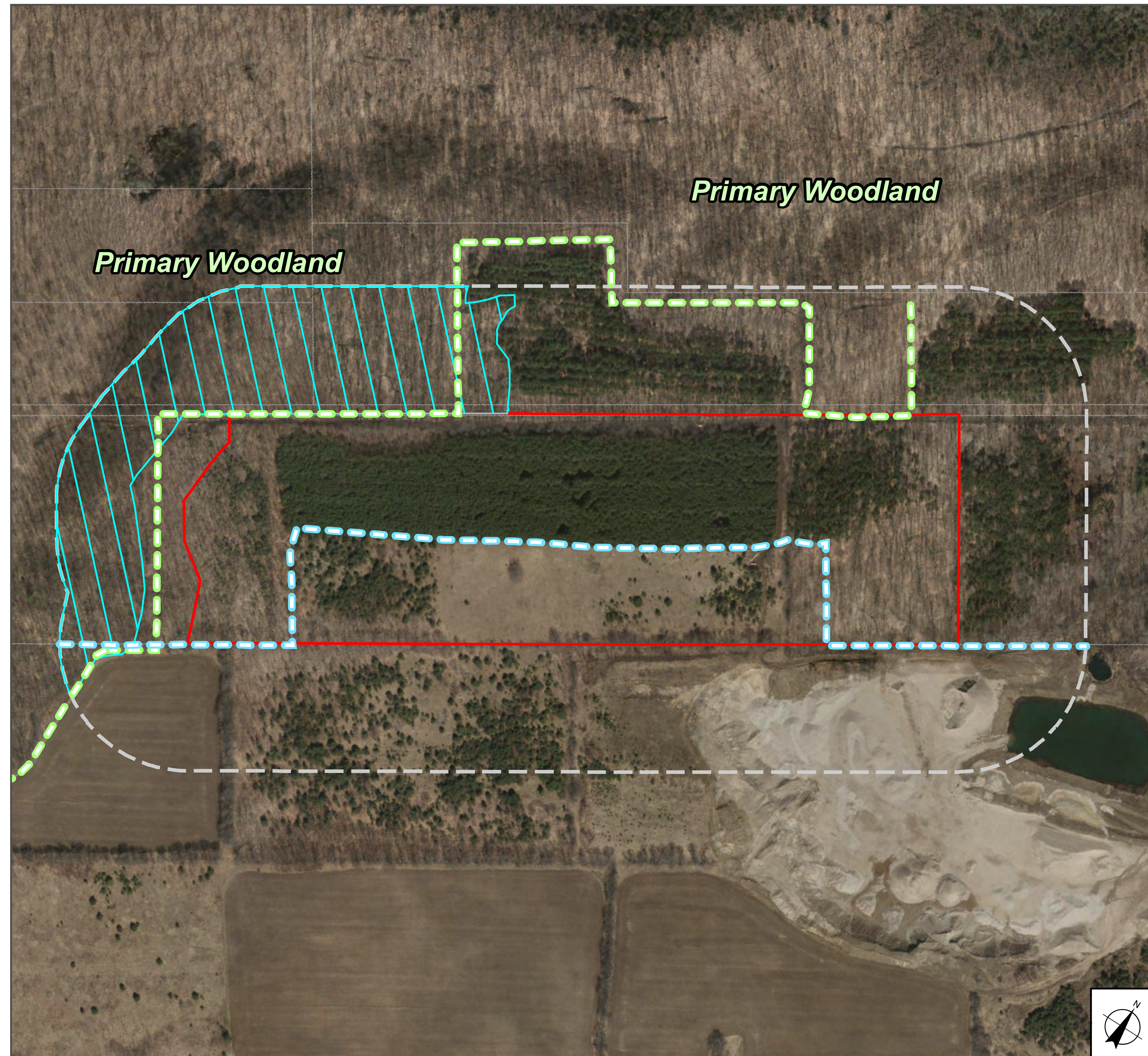
# 1954 AERIAL PHOTOGRAPH






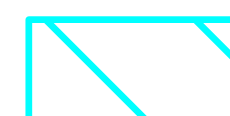

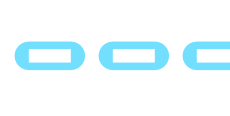
## Legend

-  Licensed Boundary
-  120m Buffer from Licensed Boundary

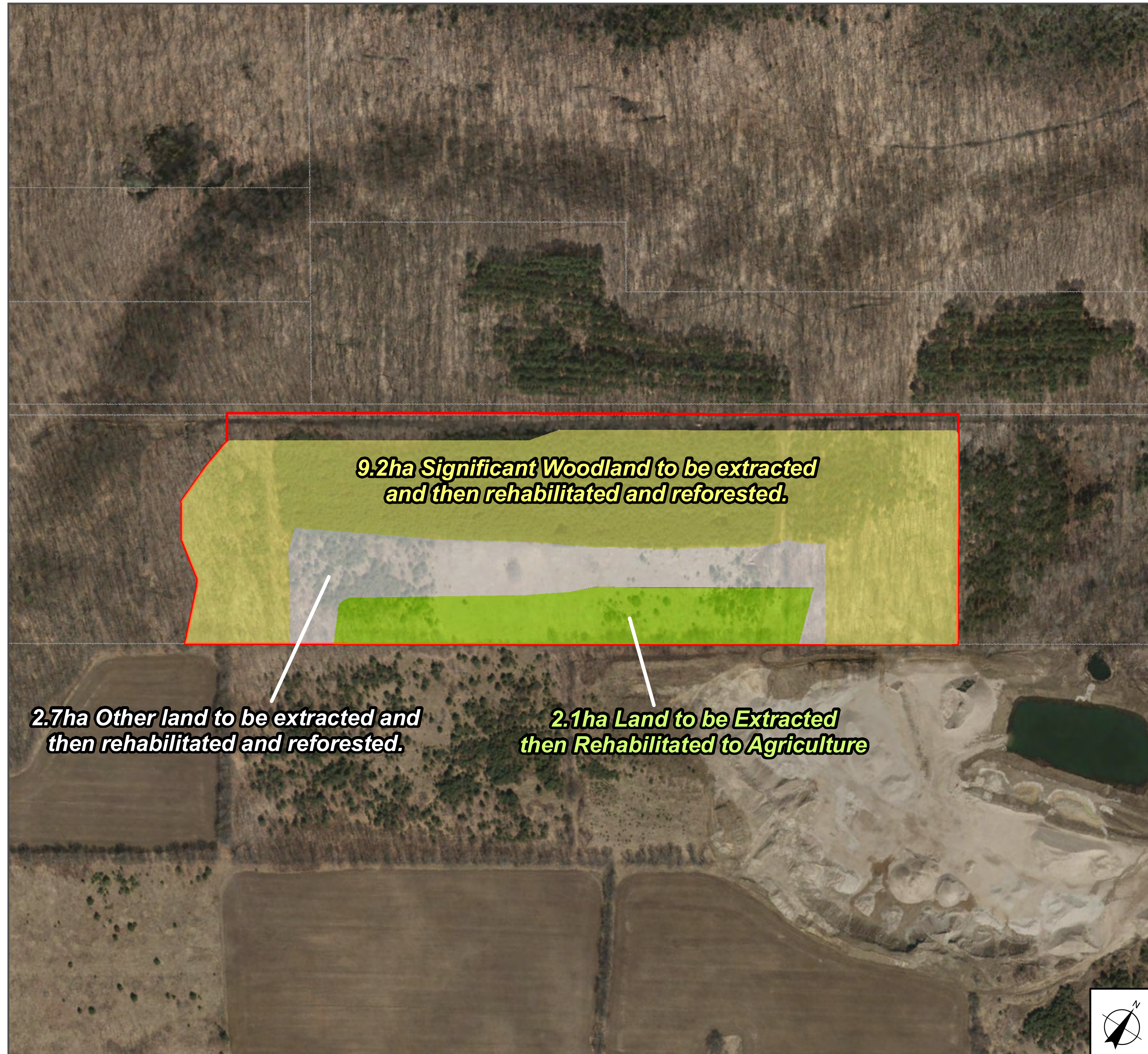
# SIGNIFICANT FEATURES



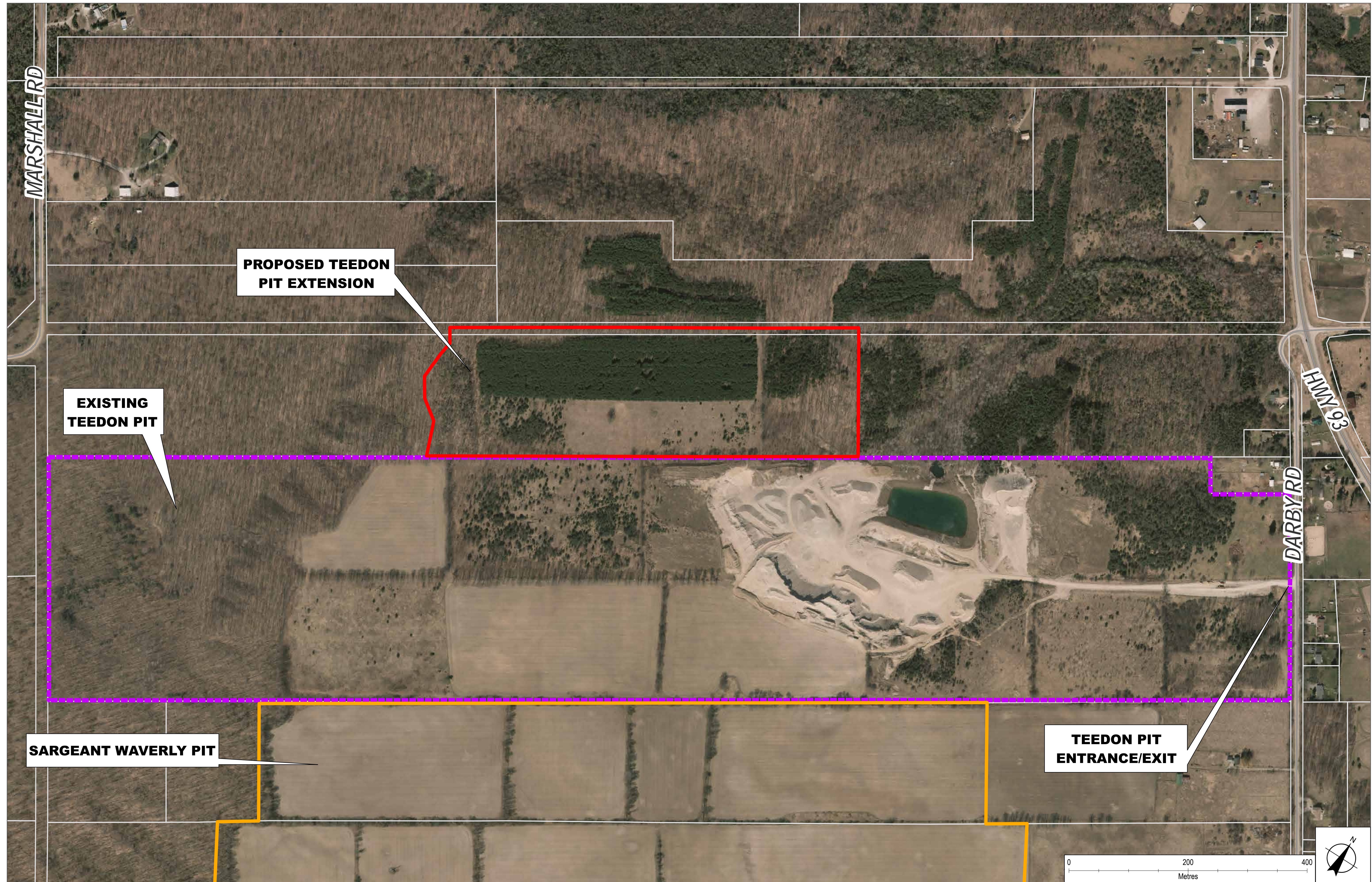
## Legend

-  Licensed Boundary
-  120m Buffer from Licensed Boundary
-  Primary Woodland Boundary
-  Significant Wildlife Habitat for Woodland Area
-  Sensitive Bird Species and Special Concern Bird Species
-  Recommended Significant Woodland Boundary (GEC)

# REFORESTATION AREAS - WOODLAND AREA INCREASED BY 2.7 ha



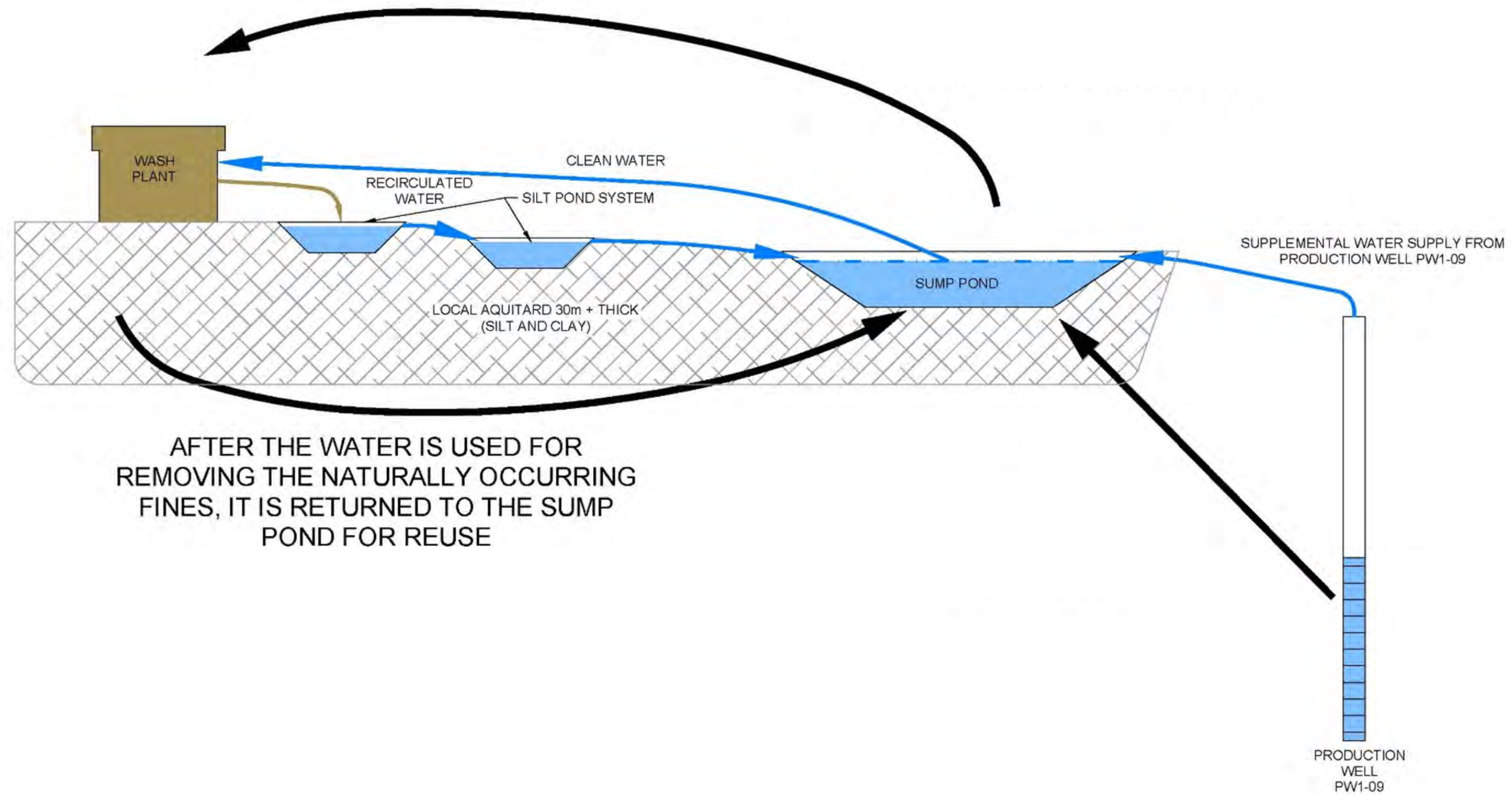
# SITE & SURROUNDING LANDS



# PROPOSED TEEDON PIT EXTENSION - HYDROGEOLOGY

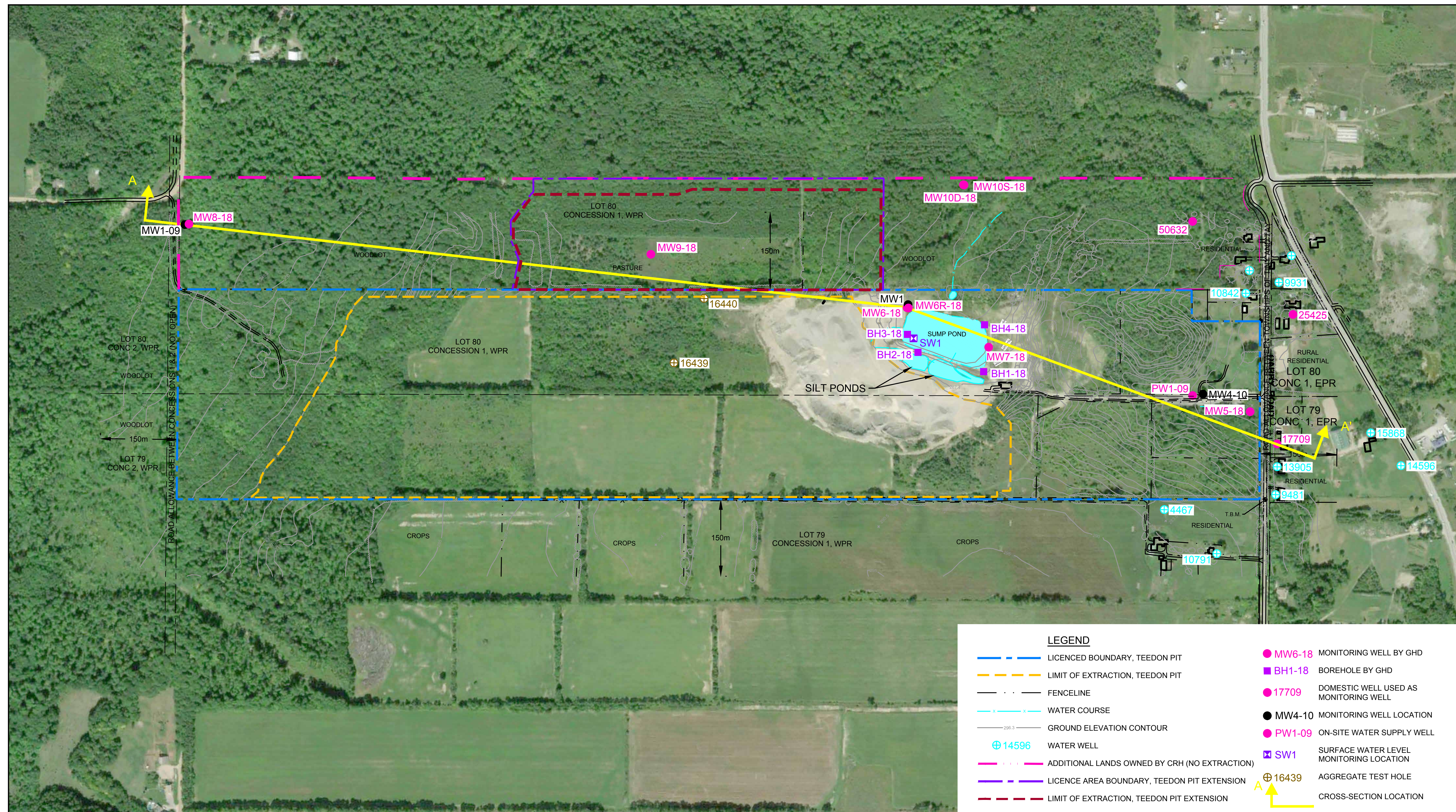
- Applications to the Township of Tiny and the Ministry of Natural Resources & Forestry filed in 2011 included a hydrogeology report by Alpha Environmental Services Inc.
- The report by Alpha confirmed the proposed pit extension would not have any impact on water levels or water quality.
- The Township of Tiny retained R.J. Burnside & Associates Ltd. to peer review the Alpha report.
- Burnside's review resulted in the application being revised to address Burnside's comments and in November 2014 Burnside confirmed their comments have been satisfactorily addressed.
- Dufferin retained GHD to install 7 additional ground water monitors at the Teedon Pit and on the proposed extension lands. The site now has 11 monitoring wells. The production well and 3 domestic wells are also monitored.
- GHD also reviewed the Dufferin proposal and prepared a hydrogeology report, which concluded the proposed pit extension will not have impacts on water levels or water quality.
- Water level measurements are collected both manually and using pressure transducers/data loggers in all monitoring wells.
- The Ministry of Environment, Conservation and Parks (MECP) has been to the site several times and observed the installation of new monitoring wells.
- Geological information from the new wells and boreholes was provided to the Ontario Geologic Survey (OGS). OGS was invited to observe the installation of the new monitoring wells.
- GHD completed a neighbour well survey for wells within a 1 km radius of the Teedon Pit boundary. (The Ministry of Environment, Conservation and Parks well survey requirement is 0.5 km from the point of taking.)
- Dufferin retained a licensed well contractor to assess neighbour wells where concerns of sediment in their wells was expressed.

# AGGREGATE WASHING RECIRCULATION SYSTEM

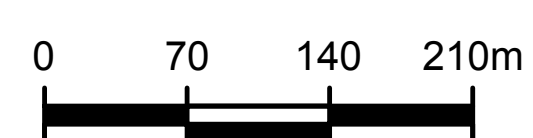


AFTER THE WATER IS USED FOR REMOVING THE NATURALLY OCCURRING FINES, IT IS RETURNED TO THE SUMP POND FOR REUSE

# THE GROUNDWATER TABLE WILL BE MONITORED TO CONFIRM WATER LEVELS AND WATER QUALITY HAVE NOT BEEN IMPACTED. REPORTS ARE MADE AVAILABLE TO ALL AGENCIES AND THE PUBLIC.



Source: Microsoft Product Screen shot Reprinted with permission from Microsoft Corporation, Aquisition Date 2018, Accessed April, 2018



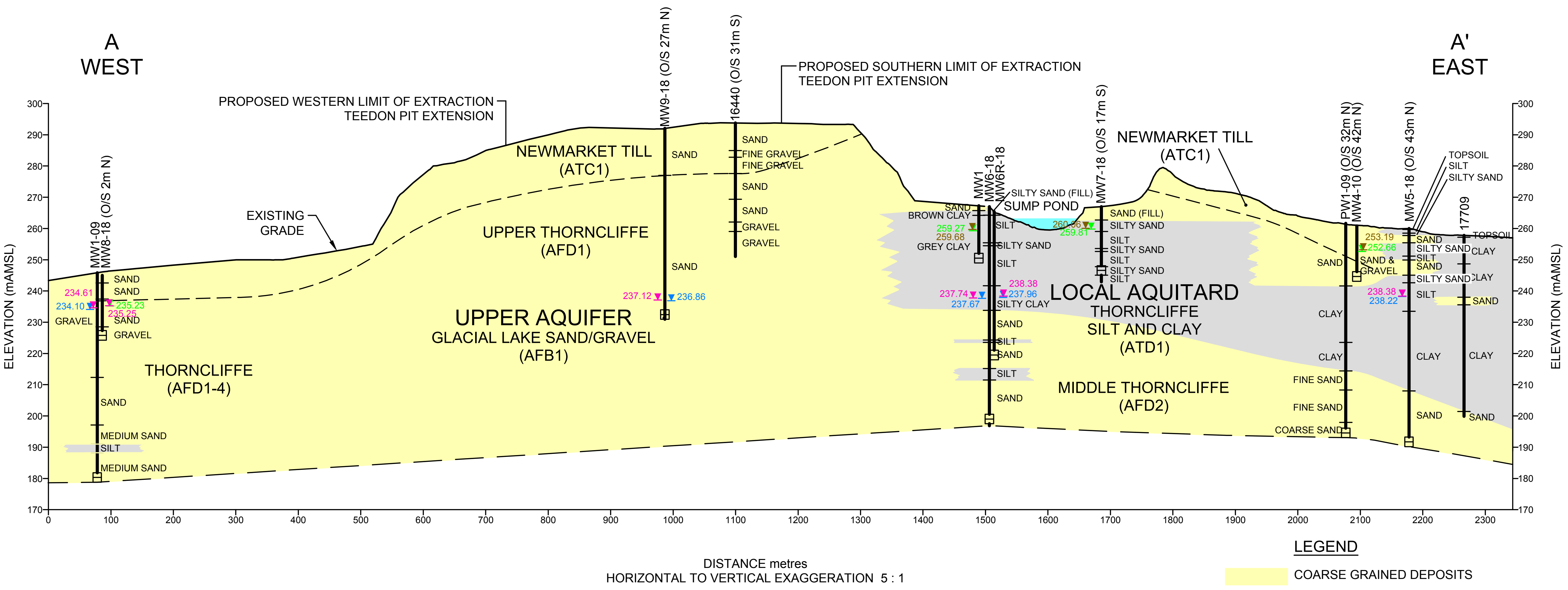
TEEDON PIT EXTENSION  
TOWNSHIP OF TINY, COUNTY OF SIMCOE, ONTARIO

MONITORING WELL AND  
HYDROGEOLOGIC CROSS-SECTION LOCATIONS





# HYDROGEOLOGICAL CROSS-SECTION FOR THE TEEDON PIT AND THE PROPOSED EXTENSION



LOCAL STRATIGRAPHY AND HYDROSTRATIGRAPHY OBTAINED BY GHD ON BEHALF OF DUFFERIN WAS CORRELATED WITH THE 2017 WORK BY RILEY P. M. MULLIGAN AND ANDY F. BAJC. "QUATERNARY SEDIMENT ARCHITECTURE OF SIMCOE COUNTY, SOUTHERN ONTARIO" SUMP POND TOPOGRAPHY BY DELPH & JENKINS LIMITED, MAY 2018.

- LEGEND**
- COARSE GRAINED DEPOSITS
  - FINE GRAINED DEPOSITS
  - ▼ 252.66 SHALLOW GROUNDWATER ELEVATION OCTOBER 10, 2018
  - ▼ 234.10 DEEP GROUNDWATER ELEVATION, OCTOBER 10, 2018
  - ▼ 238.35 MAXIMUM OBSERVED GROUNDWATER ELEVATION
  - ▼ 253.19 MAXIMUM OBSERVED SHALLOW AQUITARD GROUNDWATER ELEVATION

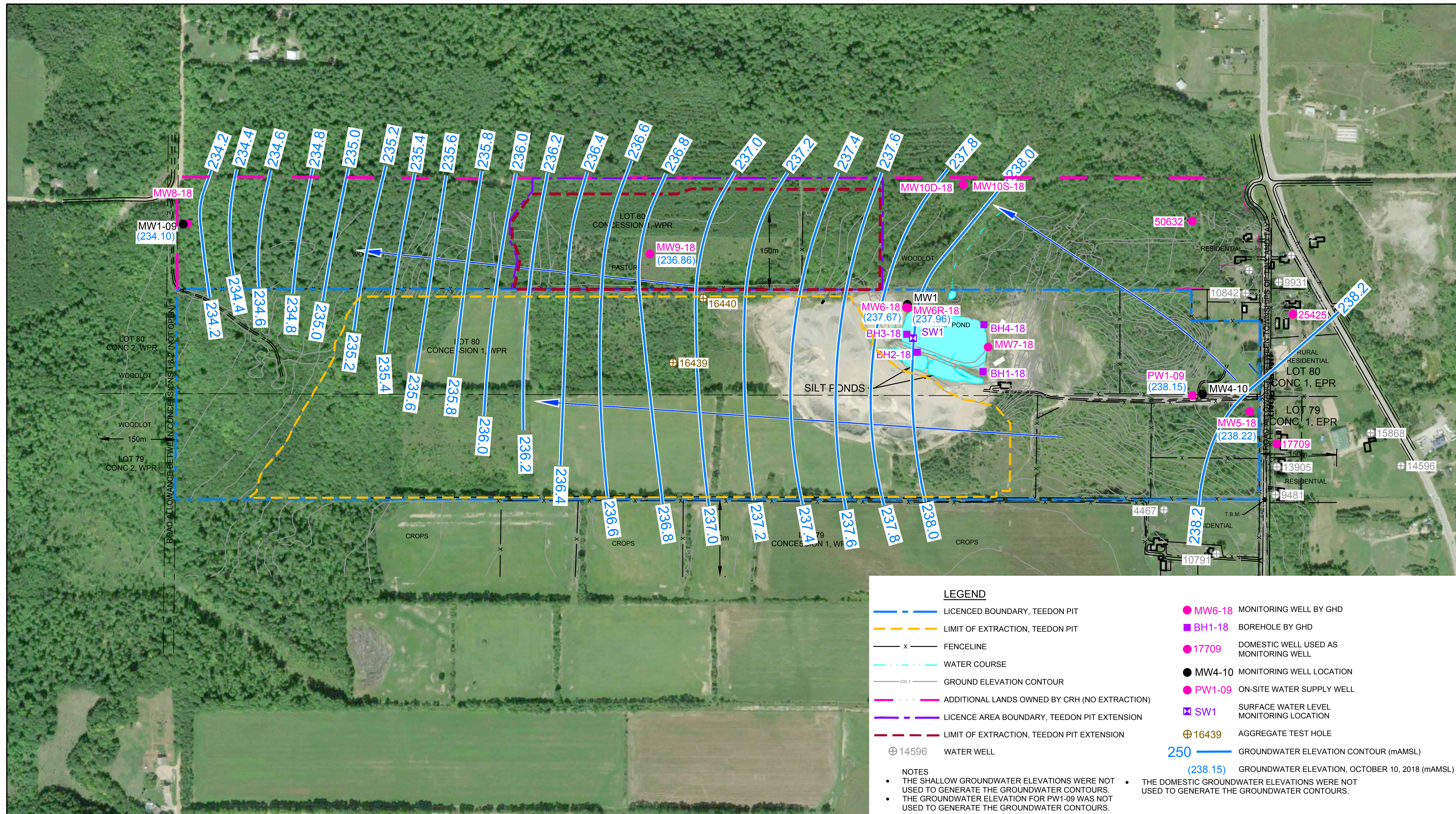


TEEDON PIT EXTENSION  
TOWNSHIP OF TINY, COUNTY OF SIMCOE, ONTARIO

SITE HYDROGEOLOGIC CROSS-SECTION A-A'

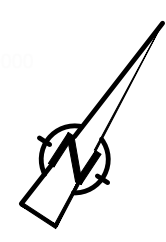


# GROUNDWATER ELEVATION CONTOURS AT THE TEEDON PIT AND THE PROPOSED EXTENSION



Source: Microsoft Product Screen shot Reprinted with permission from Microsoft Corporation, Aquisition Date 2018, Accessed April, 2018

0 70 140 210m

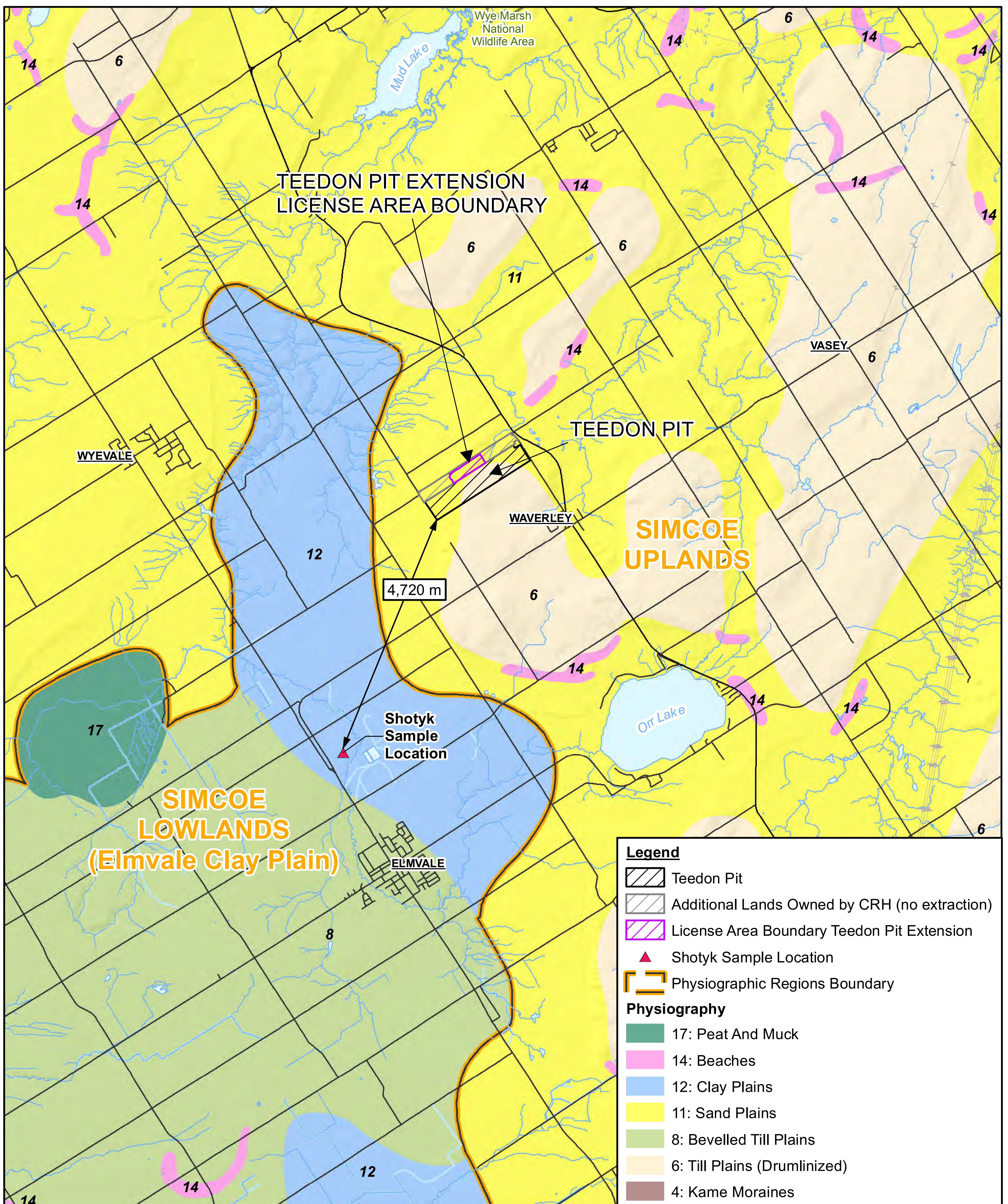


TEEDON PIT EXTENSION  
TOWNSHIP OF TINY, COUNTY OF SIMCOE, ONTARIO

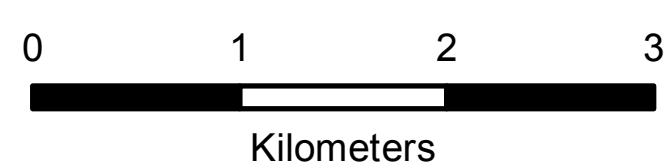
GROUNDWATER ELEVATION CONTOURS (mAMSL)



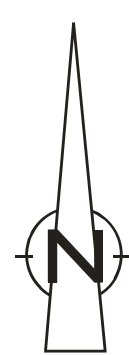
# Physiography and Physiographic Regions



Source: MNRF NRVIS, 2018. Produced by GHD under licence from Ontario Ministry of Natural Resources and Forestry, © Queen's Printer 2019; Chapman, L.J. and Putnam, D.F. 2007. Physiography of southern Ontario; Ontario Geological Survey, Miscellaneous Release—Data 228.



Coordinate System:  
NAD 1983 UTM Zone 17N



DUFFERIN TEEDON PIT  
AND TEEDON PIT EXTENSION  
TOWNSHIP OF TINY  
COUNTY OF SIMCOE, ONTARIO

PHYSIOGRAPHY AND  
PHYSIOGRAPHIC REGIONS

GIS File: Q:\GIS\PROJECTS\11155000s\11155365\Layouts\PRES001\11155365-00(PRES001)GIS-WA001.mxd



# HYDROGEOLOGY

## WILL THE TEEDON PIT EXTENSION HAVE AN IMPACT ON WATER TABLE LEVELS OR GROUNDWATER QUALITY?

- The Teedon Pit Extension will not have an impact on water levels as shown by the hydrographs (water level data collected continuously with pressure transducers/data loggers).
- The Teedon Pit Extension will not have an impact on groundwater quality.
- No chemicals are used in the production of aggregate products.

## DOES REMOVING AGGREGATE TAKE AWAY THE NATURAL FILTER?

- Scientists rely on the Source + Pathway + Receptor model to evaluate the risk of groundwater pollution.
- A pit may reduce the amount of sand and gravel above the water table, but it doesn't stop the filtration process.
- Most filter beds made of sand in water treatment plants are only a few centimetres or a couple of metres thick.
- Mandatory setbacks from the edge of a pit to property boundary alone are at least 15 metres. This allows plenty of opportunity for filtration and other physical, chemical, and biological processes to occur.
- A world-wide literature review for the Ontario Ministry of Natural Resources confirmed that not a single instance of contamination could be found to be caused by a pit or quarry.

## IS MORE MONITORING NEEDED? IS THERE AN IMPACT ON THE ALLISTON AQUIFER?

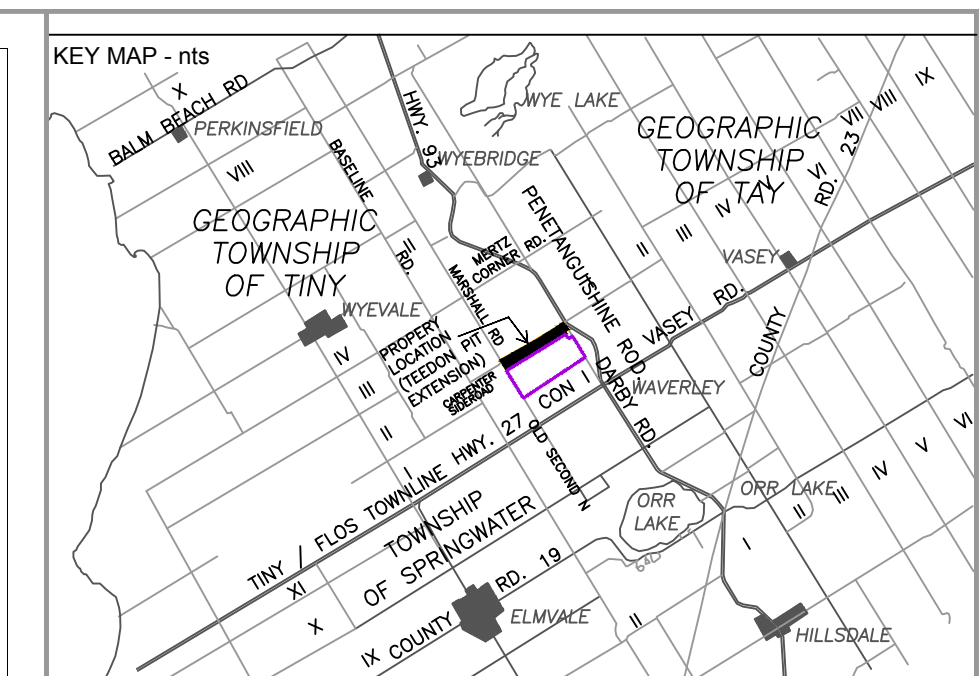
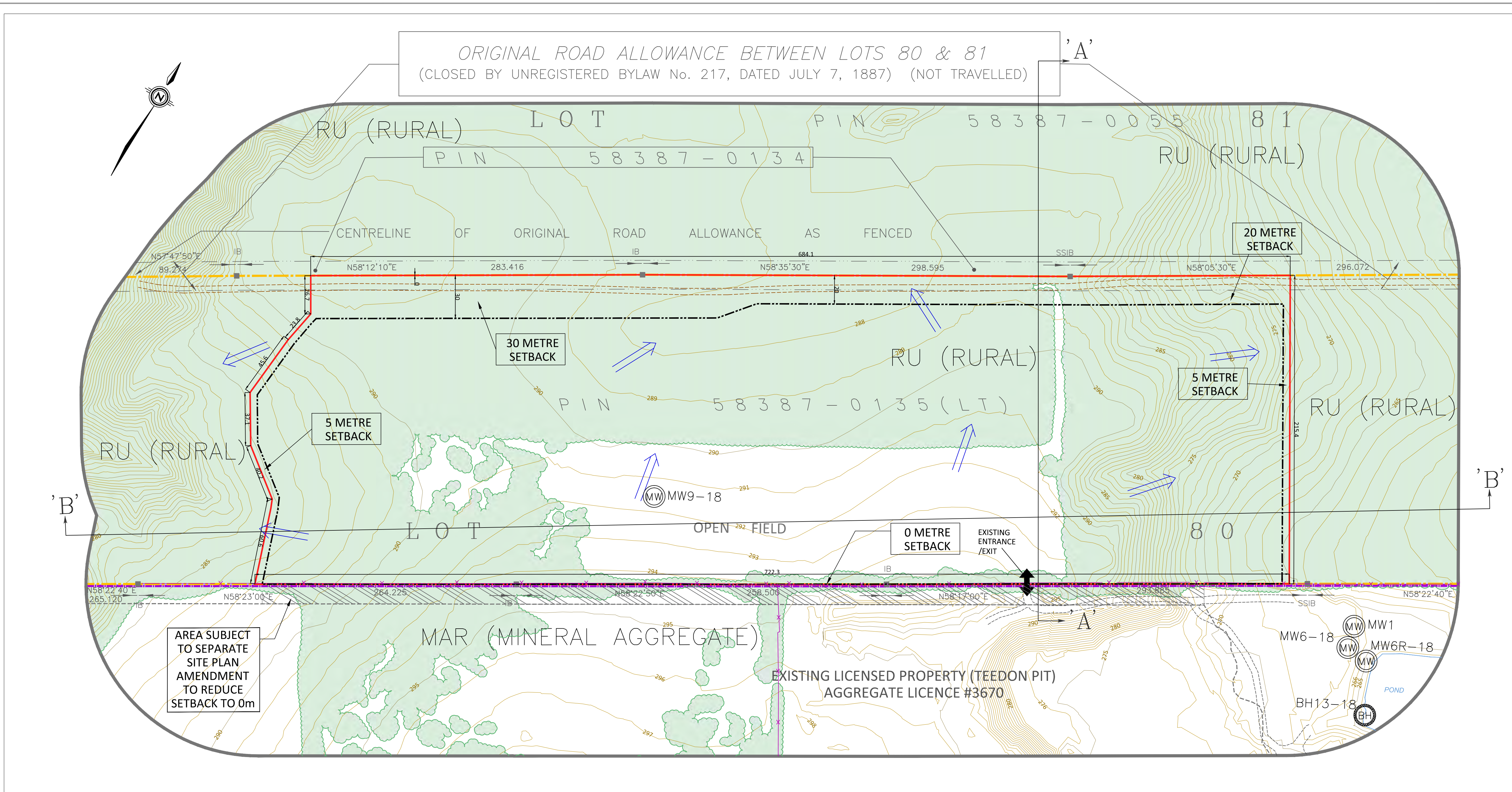
- Dufferin currently conducts significant monitoring at the Teedon Pit and Teedon Pit Extension. Monitoring results demonstrate that there is no change in water levels from operating the Teedon Pit and there will not be impacts from operating the Teedon Pit Extension. As such, there is no impact to the Alliston aquifer based on this data.
- Monitoring at the Teedon Pit and Teedon Pit Extension is in line with monitoring at other pits in Ontario.
- Currently there are 11 monitoring wells, 3 domestic wells, a production well, and sump pond equipped with pressure transducers/data loggers being monitored. This network provides sufficient coverage.

## WHY IS THERE SILT IN NEIGHBOUR'S WELLS? CAUSE OF ORANGE WATER?

- There are numerous reasons that silt could be in the neighbours wells:
  - Well design and construction is the solution to avoid silt issues
  - Silt vs. scale from hard water (two separate issues)
  - Improper well design or construction (slot size might be too large and a sandpack might not be part of well construction)
  - Insufficient well development after construction
  - Corrosion of well casing, liner or screen causing holes
  - Failure of the annular or casing seal
  - Scaling of the well screen (iron bacteria)
  - Improper or lack of well maintenance
- Cause of orange water is very common well problem
  - From naturally occurring iron bacteria in the well or iron accumulations around well screen
  - Generally fixed with water softener, filters or combination.

## WHY DOES THE SITE NOT MEASURE TURBIDITY?

- Turbidity is a measure of the relative clarity or cloudiness of water.
- Turbidity data would be collected for the following purposes:
  - Effectiveness of well design
  - Stabilization parameter/indicator of steady state conditions prior to the collection of groundwater samples.
  - Determine optimum groundwater withdrawal rates.
  - Maintenance of a well.
- The Dufferin monitoring wells were constructed and designed to measure groundwater levels and not turbidity.
- Given the above, turbidity measurements would not be beneficial.



**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

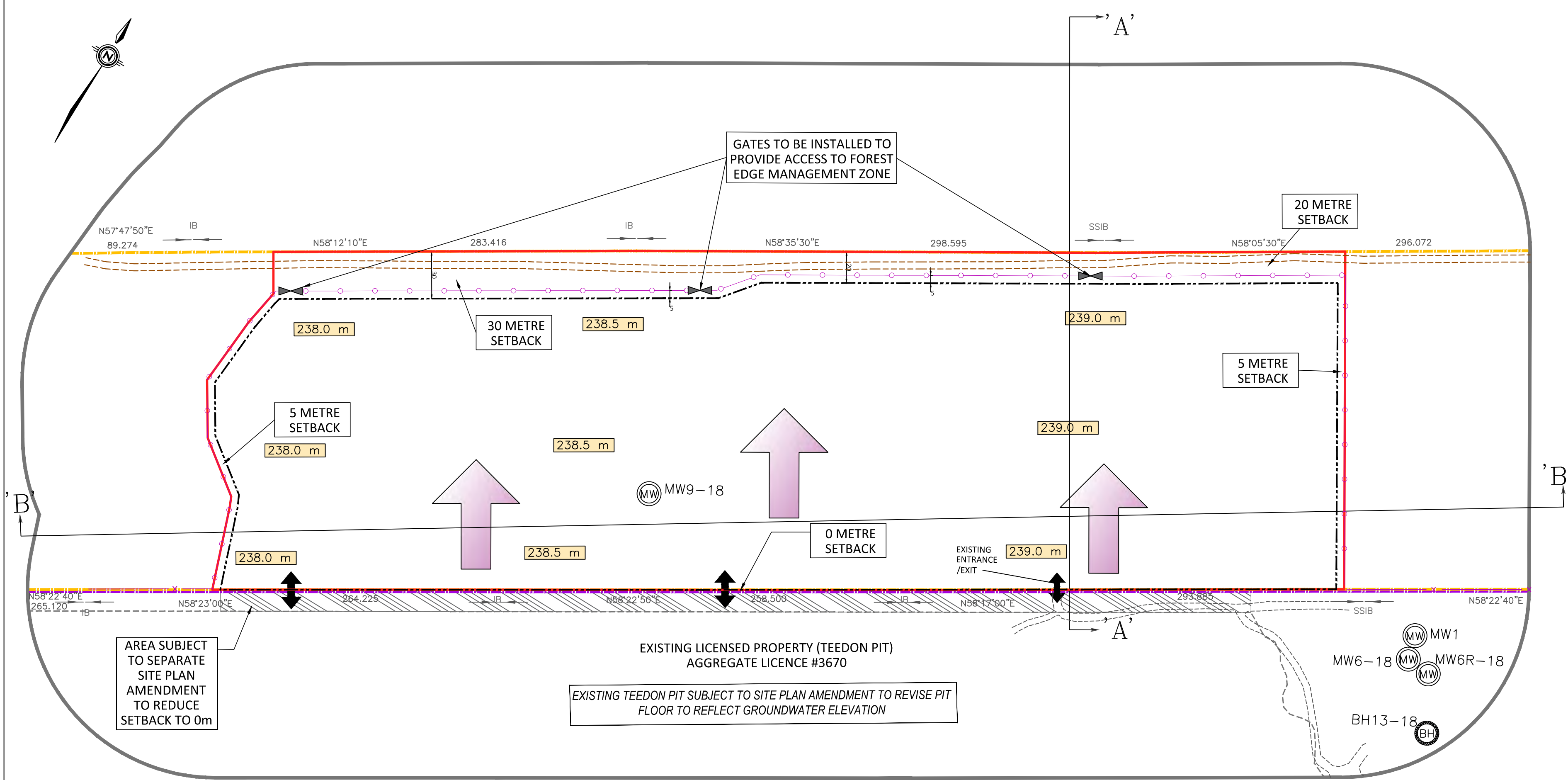
**CEDARHURST QUARRIES & CRUSHING LIMITED**  
 C/O CRH CANADA GROUP INC.  
 2300 Steeles Avenue W. Suite 400  
 Concord, Ontario L4K 5X6

0 10 25 50 75 Meters  
 Plan Scale 1:1000

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.

**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).

**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).

**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.

**FOREST EDGE MANAGEMENT ZONE 'A' (EAST AND WEST SIDE)**  
 CUT 10m OF DEFECTIVE TREES  
 AUGMENT NEW FOREST EDGE WITH RED OAK AND WHITE PINE

**FOREST EDGE MANAGEMENT ZONE 'B' (NORTH SIDE)**  
 SOUTH SIDE OF TRAIL WHERE FEASIBLE PLANT WITH 1-2 ROWS OF WHITE CEDAR AND WHITE SPRUCE  
 AUGMENT NEW FOREST EDGE WITH RED OAK AND WHITE PINE  
 REMOVE DEFECTIVE TREES

**MONITORING WELL SCHEMATIC**  
 MW8-18, MW1-09, MW5-18, MW10D-18, MW9-18, MW11-18, MW12-18, MW13-18

**TREE CLEARING SCHEMATIC**  
 TREE CLEARING ZONE '1' (NOV 1<sup>ST</sup> - JAN 31<sup>ST</sup>)  
 TREE CLEARING ZONE '2' (NOV 1<sup>ST</sup> - MAR 31<sup>ST</sup>)

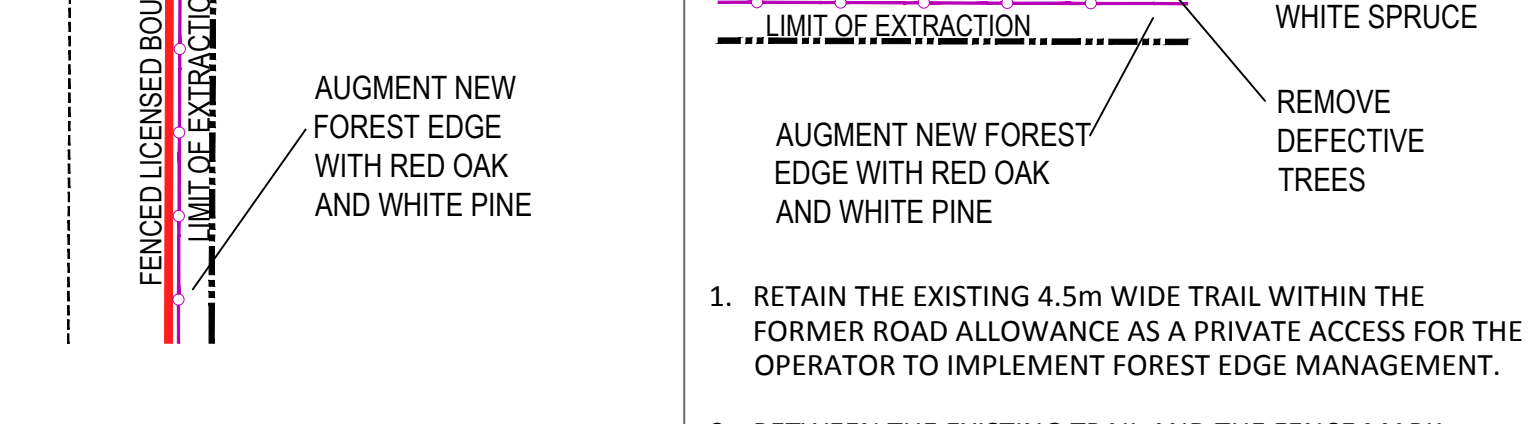
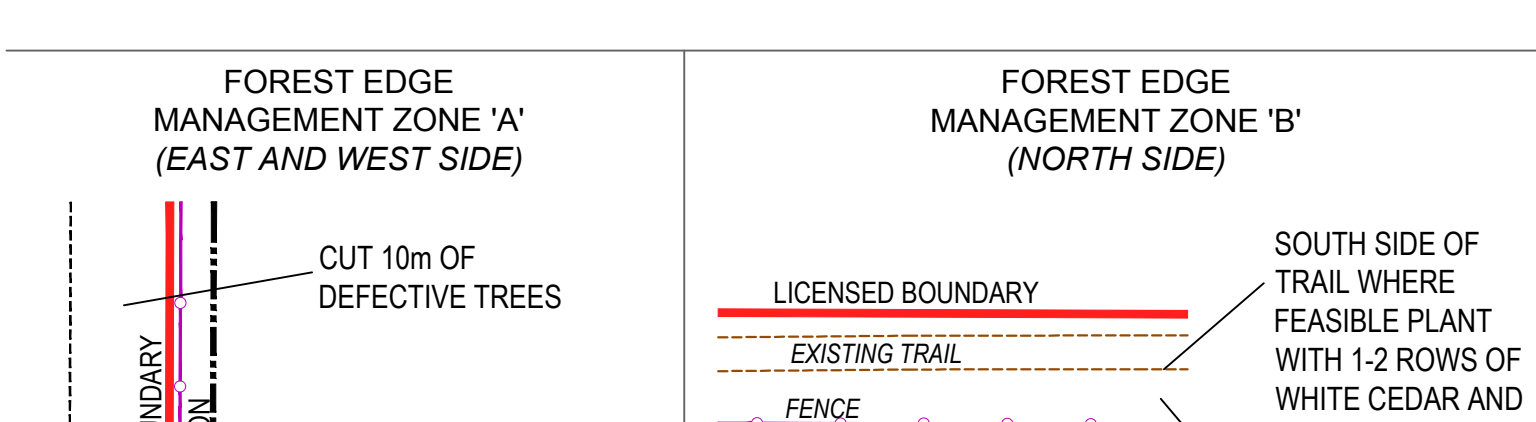
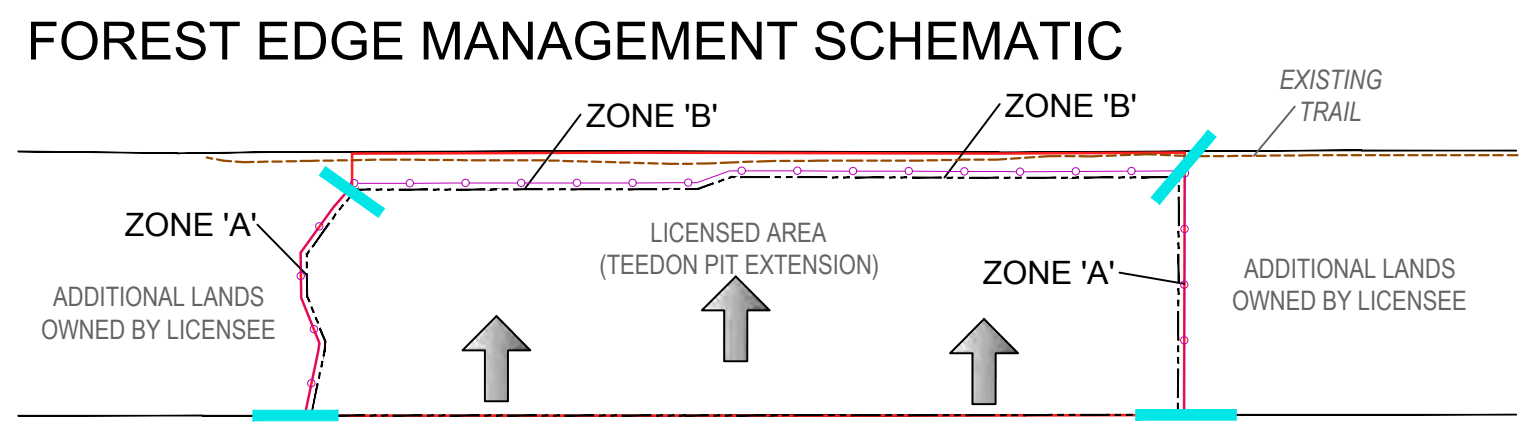
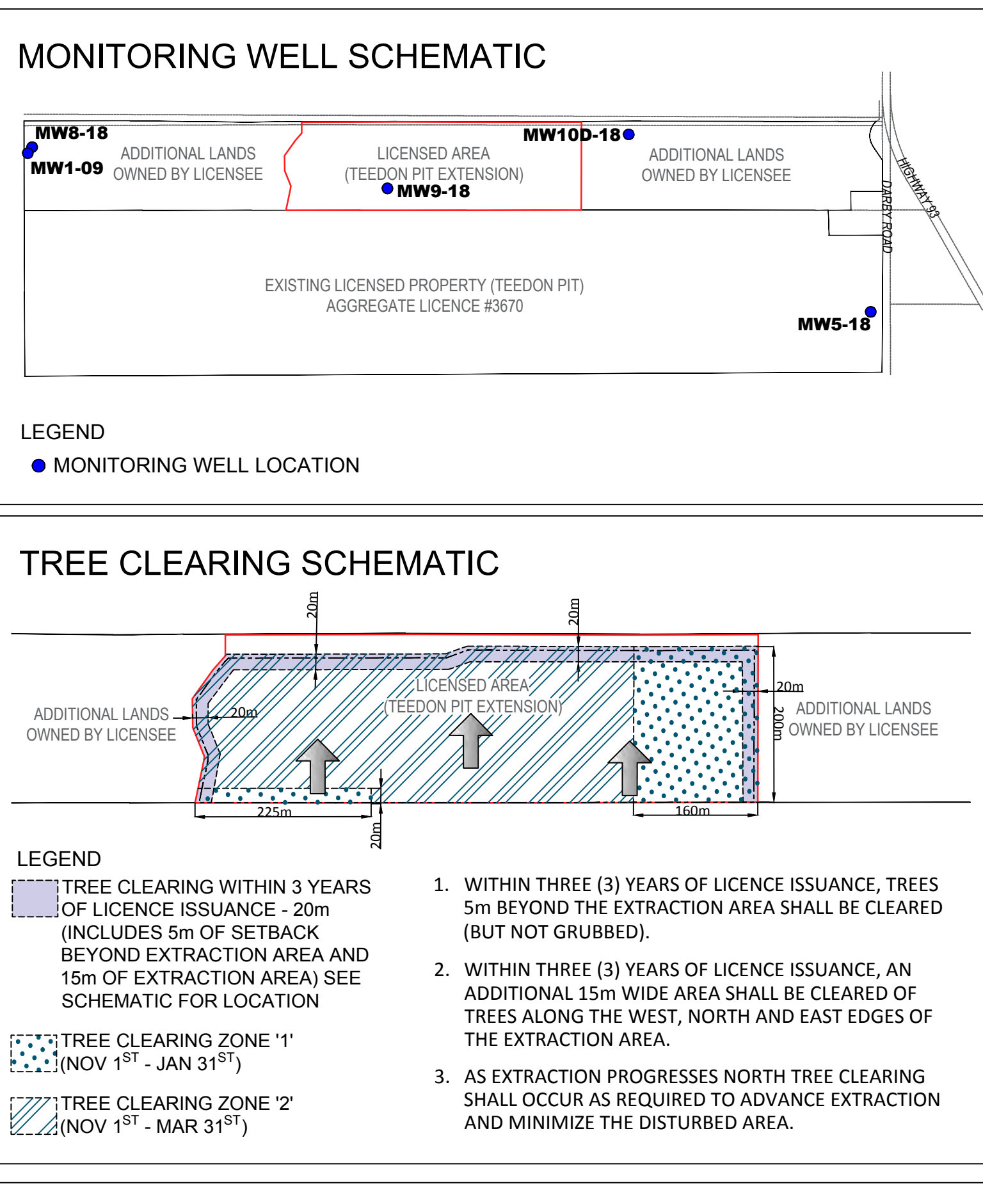
**FOREST EDGE MANAGEMENT SCHEMATIC**  
 ZONE 'A', ZONE 'B', EXISTING TRAIL

**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 AVAILABLE 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.

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



- WITHIN THREE (3) YEARS OF LICENCE ISSUANCE, TREES 5m BEYOND 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.

- 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 20<sup>TH</sup>.

- 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.
- TREE PLANTING WITHIN FOREST EDGE MANAGEMENT AREA SHALL BE 1 OR 2 GALLON CONTAINER STOCK.
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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.

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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).
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**Site Plan Amendments**

No.	Date	Description	By
1			
2			
3			

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

**MNRF Approval Stamp**

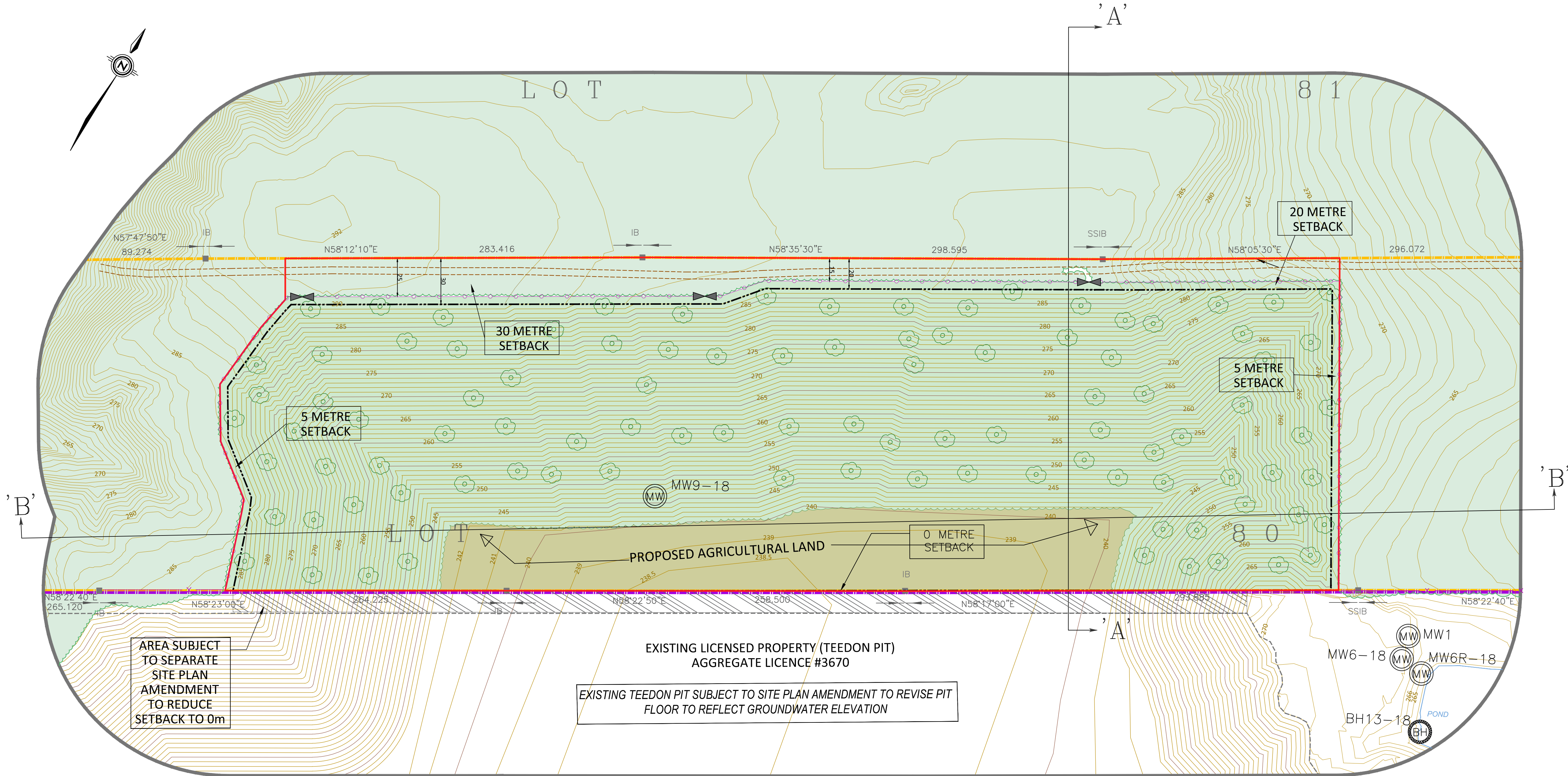
**Stamp**

**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

**OPERATIONAL PLAN**  
**2 OF 4**

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



### LEGEND

- LICENSED AREA BOUNDARY
- - - LIMIT OF EXTRACTION
- LICENSED AREA BOUNDARY (LICENCE # 3670 - TEEDON PIT)
- - - LIMIT OF EXTRACTION (LICENCE #3670 - TEEDON PIT)
- CROSS-SECTION
- ADDITIONAL LANDS OWNED BY CRH CANADA GROUP INC.
- LIMIT OF 120m INFORMATION ZONE
- - - EXISTING TRAIL
- CONTOUR LINE
- - - EXISTING FENCE
- 1.2m FENCE
- ⊙ BOREHOLE
- ⊙ MONITORING WELL
- ⊘ GATE
- EXISTING VEGETATION
- PROPOSED FORESTED AREA (SEE TREE PLANTING SCHEMATIC ON THIS PAGE)
- PROPOSED AGRICULTURAL LAND

### 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.

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

Site Plan Amendments			
No.	Date	Description	By
1			
2			
3			

- 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 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 20<sup>TH</sup>.
- 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.

#### 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.

**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

**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

Scale: 1:1000

0 25 50 75 Metres

Drawn By: L.H. File No: 9061CZ

Checked By: B.Z. Date: January 2019

File Name: **REHABILITATION PLAN**

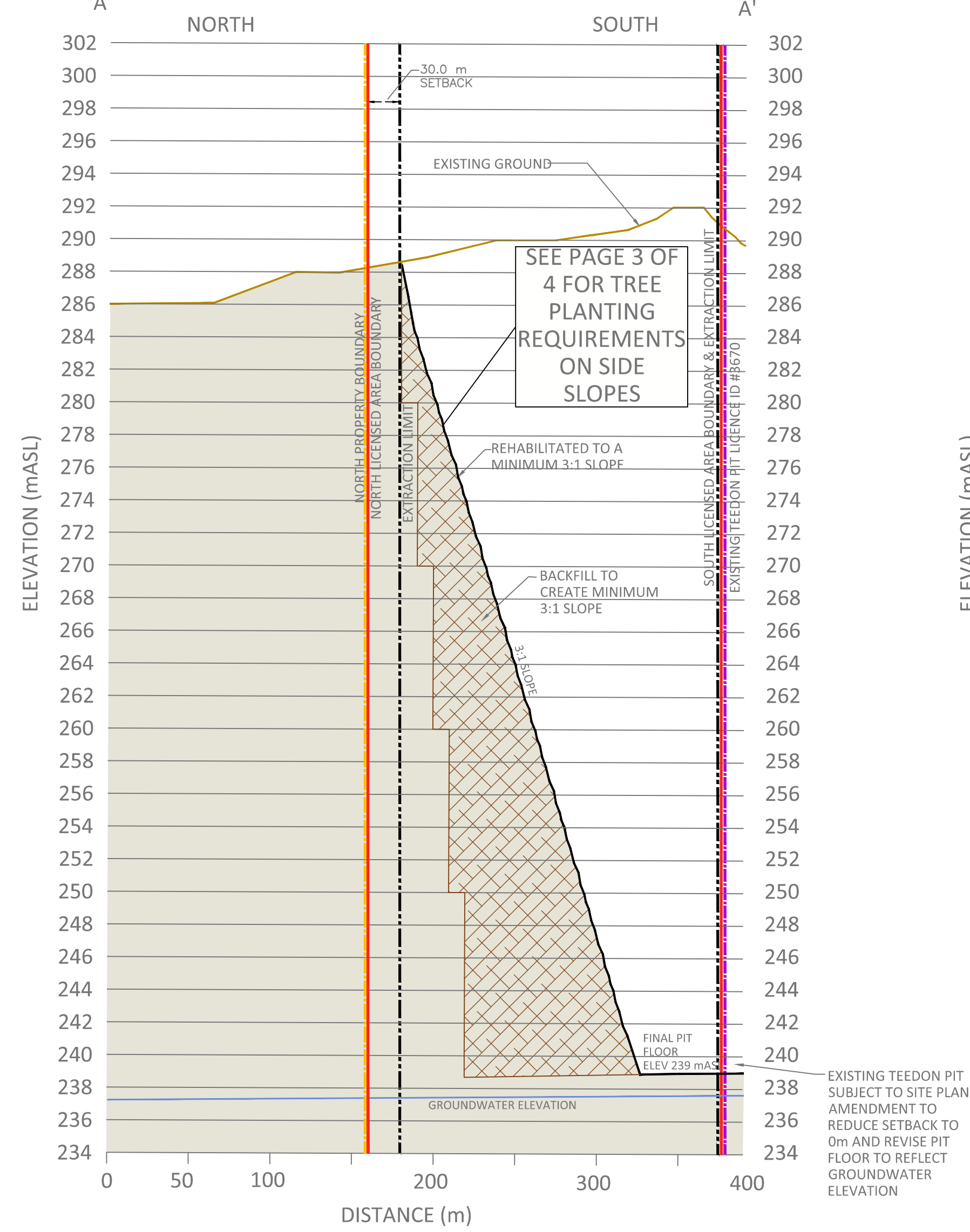
Drawing No. **3 OF 4**

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

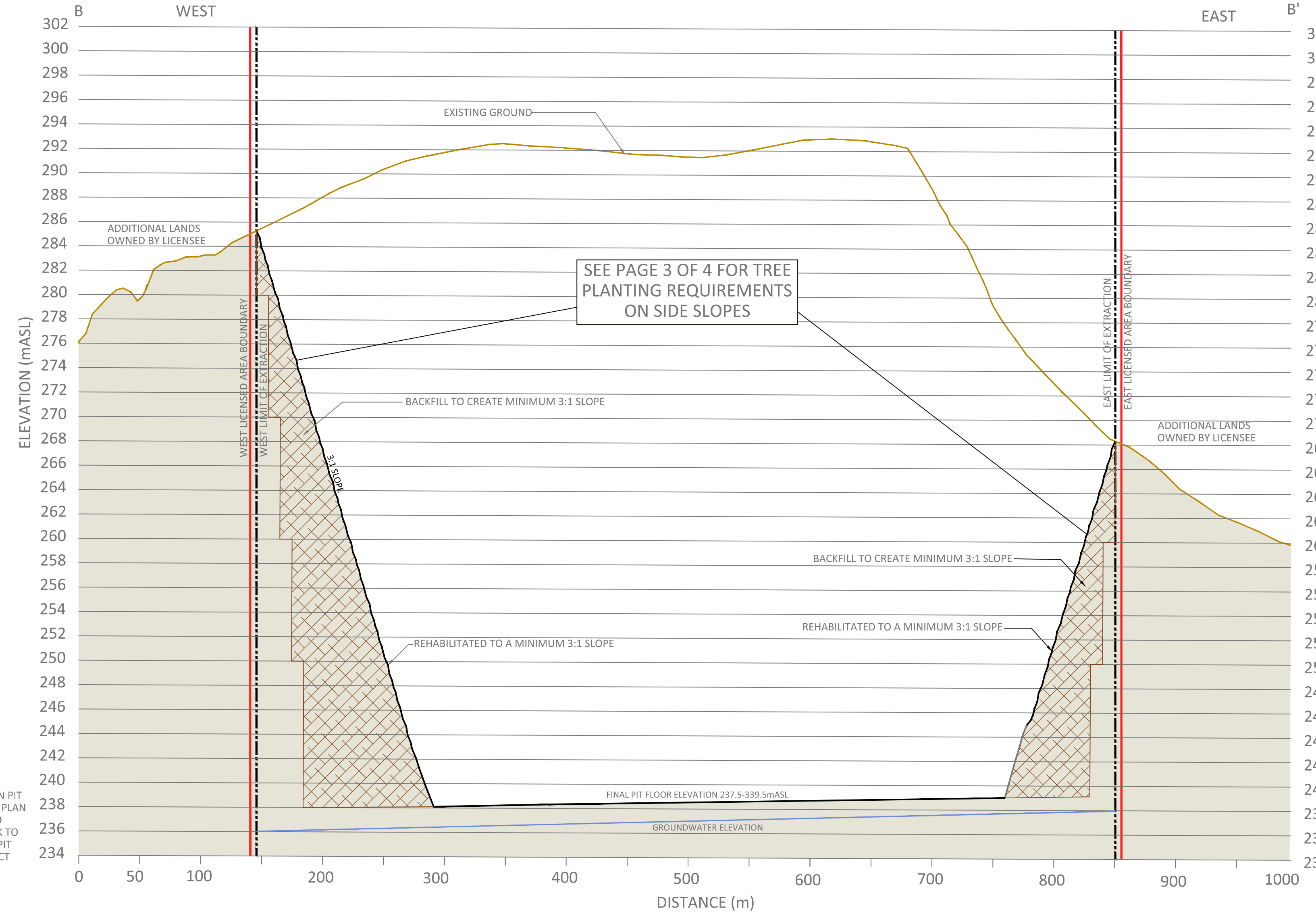
**LEGEND**

- 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  
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