



THE CORPORATION OF THE TOWNSHIP OF TINY

Meeting Date: November 30, 2020

Moved by: Mintoff

Carried: 5-0

Seconded by: Wahman

Defeated: _____

Signed: [Signature]

WHEREAS the Committee of the Whole considered Confidential Planning and Development Report PD-042-20 regarding the Teedon Pit Extension – Aggregate Resource Act Application;

AND WHEREAS the matter was forwarded to the November 30, 2020 Regular Meeting of Council for formal approval due to its time sensitive nature;

NOW THEREFORE BE IT RESOLVED THAT staff be directed to proceed with the recommendations in PD-042-20;

AND THAT staff include the following comments in the letter to the Ministry of Natural Resources and Forestry and CRH Canada Group Inc.:

1. That the Township is fundamentally opposed to the extraction and washing of aggregate in environmentally sensitive areas.
2. That there is presently a groundwater study being undertaken by Dr. Cherry, et al and that the findings of this report be taken into consideration by the Province prior to the issuance of any further licenses.

AND FURTHER THAT Report PD-042-20, once approved, be made public in nature.



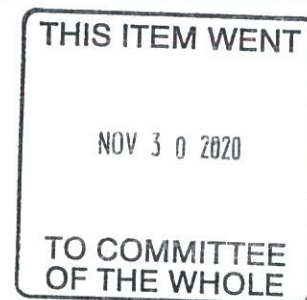
CONFIDENTIAL
PLANNING & DEVELOPMENT REPORT PD-042-20

TO: Mayor Cornell and Members of Council

FROM: Shawn Persaud, Director of Planning & Development
Tim Leitch, Director of Public Works

DATE: 11-30-2020

RE: Teedon Pit Extension – Aggregate Resources Act Application
CRH Canada Group Inc.
North Part of Lot 80, Concession 1 O.S.
2 Darby Road – Roll #1-029-00 (Appendix 1)
Our File No. '19/D05 (DS #62762)



Recommendation

It is recommended that Council:

1. Receive this report and attached peer review letters;
2. Direct staff to submit a response letter to the MNRF and CRH with the outstanding issues as outlined in this Report (see Appendix 5); and
3. Direct staff to continue to work with Barriston to prepare Minutes of Settlement and report back to Council if all outstanding matters are resolved.

Background

On January 22, 2019, the Township received notification of the Aggregate Resources Act (ARA) application entitled "Teedon Pit Extension" made to the Ministry of Natural Resources and Forestry (MNRF) by CRH Canada Group Inc. (CRH). The application included the following supporting studies/reports:

- Summary Statement Report, dated January 2019, prepared by Brian Zeman, MHBC Planning;
- Natural Environment Level 1 and 2 Technical Report, dated January 2019, prepared by Goodban Ecological Consulting Inc.;
- Acoustic Assessment Report, dated January 2019, prepared by Theakston Environmental;
- Hydrogeological Assessment, dated January 8, 2019, prepared by GHD;
- Stage 1 and 2 Archaeological Assessment Report, dated May 2011, prepared by The Central Archaeology Group Inc. and letter dated June 24, 2011 from the Ministry of Tourism and Culture stating that the Ministry concurs with the recommendations of the report that there are no further archaeological concerns for the subject property.
- Site Plans dated January 2019, prepared by Brian Zeman, MHBC Planning of the Existing Features, Operational Plan, Rehabilitation Plan, and Cross Sections.

The Engineering Reports were peer reviewed by R. J. Burnside & Associates Limited (Burnside), Township Engineering Consultant and Aercoustics Engineering Limited (Aercoustics), Engineering Noise Consultant retained by Burnside. The Environmental Report was peer reviewed by the Severn Sound Environmental Association (SSEA).

Confidential Planning & Development Report PD-018-19 was presented to Council at the February 28, 2019 Committee of the Whole meeting. This report provided a summary of the ARA Application and recommended Township comments to the MNRF based on the peer reviews. As a result of Motion #077/19, Recommendation #085/19, and Motion #100/19 approved by Council, a formal objection letter, dated March 25, 2019, was provided to the MNRF as the Township's formal comments on the Teedon Pit Extension ARA Application.

CRH provided a letter response dated June 20, 2019, to the Township's comments and was accompanied by the following supporting studies/reports:

- Category 1 Permit-to-take Water Renewal Application – Supporting Hydrologic and Hydrogeologic Study, dated January 19, 2018, prepared by GHD;
- 2018 Domestic Well Survey, dated April 26, 2018, prepared by GHD;
- Memorandum, dated May 2, 2019, prepared by Theakston Environmental; and
- Memorandum, dated June 21, 2019, prepared by Goodban Ecological Consulting Inc.

Confidential Planning & Development Report PD-057-19 was presented to Council at the October 28, 2019 Committee of the Whole meeting. This report provided a summary of the Burnside, Aercoustics and the SSEA peer reviews of the CRH response letter and supporting studies/reports. As a result, Motion #330/19 was approved by Council, which authorized staff to provide the Report and peer reviews to the MNRF and CRH as the Township's updated comments on the Teedon Pit Extension ARA Application.

CRH provided a letter response dated November 13, 2019 to the Township's updated comments and was accompanied by the following supporting studies/reports:

- Memorandum, dated August 29, 2019, prepared by Goodban Ecological Consulting Inc.;
- Traffic Impact Study, dated October 4, 2019, prepared by C.F. Crozier & Associates Inc.;
- Letter, dated September 25, 2019, prepared by GHD regarding Professional Opinion Regarding Neighboring Domestic Wells;
- Letter, dated September 23, 2019, prepared by GHD regarding Response to Hydrogeological Comments; and
- Sign-off, dated October 25, 2019, from MECP regarding Whip-poor-will.

In addition, the Township received a copy of a letter dated December 19, 2019, from the MNRF formally withdrawing their objection to the ARA application.

Confidential Planning & Development Report PD-004-20 was presented to Council at the January 13, 2020 Committee of the Whole meeting. This report provided a summary of the Burnside and SSEA peer reviews of the CRH response letter and supporting studies/reports. As a result, Motion #022/20 was approved by Council, which directed staff to proceed with the recommendations in the Report, where were to:

1. Receive the report and attached peer review letters as information;

2. Direct staff to submit a response letter to the MNRF and CRH with the outstanding issues as outlined in the Report; and
3. Direct staff to work with Barriston to prepare Minutes of Settlement and report back to Council if all outstanding matters are resolved.

As such, staff provided a letter, dated January 29, 2020 to the MNRF and CRH as the Township's updated comments on the Teedon Pit Extension ARA Application.

Analysis

CRH provided a letter response dated September 14, 2020 to the Township's updated comments and was accompanied by an updated set of Aggregate Resources Act Site Plans for the proposed Teedon Pit extension, dated September 2020 (Appendix 2).

In addition, a Comment Response Memo, dated October 2, 2020, prepared by C.F. Crozier & Associates Inc. was provided to the Township in response to the Township's Traffic comments.

Burnside and the SSEA have peer reviewed the response information from CRH and their consulting group and have provided the following updated peer review letters as a result:

- Peer Review Letter dated October 2, 2020 from Ms. Michelle Hudolin, Wetlands and Habitat Biologist, SSEA advising that the revisions in the Site Plans address all the Natural Heritage comments outlined in the Township's letter dated January 29, 2020 (Appendix 3).
- Peer Review Letter dated November 2, 2020 from Mr. Cecil Gratrix, C.E.T., Burnside and Mr. Henry Centen, P. Eng., P. Geo., Burnside advising that the updated Site Plans have addressed all remaining hydrogeological, noise and site operations comments outlined in the Township's letter dated January 29, 2020 (Appendix 4).

As noted in Burnside's letter, there are still outstanding traffic comments. As such, Township staff have prepared a draft letter, which outlines the outstanding items that require additional attention (Appendix 5). This letter would constitute the Township's formal updated comments on the Teedon Pit Extension ARA Application.

The next LPAT Pre-hearing Teleconference is scheduled for February 26, 2021 for an update on the status of the ARA application. As per Council's last direction to staff, staff will continue to work with Barriston to prepare Minutes of Settlement and report back to Council if all outstanding matters are resolved.

Options/Alternatives

1. Direct Staff as recommend in this Report; or
2. Take other action as directed by Council.

Financial Implications

Costs associated with the peer review are cost recoverable from the owner as part of the ARA application.

Legal costs are the responsibility of the Township.

Relationship to Strategic Plan

- Deliver Efficient and Exceptional Municipal Services
- Healthy Environment and Sustainable Community Planning

Conclusion

It is recommended that staff continue to work with Burnside to review all updated traffic information provided by the proponent and continue to work with Barriston LLP, Township Lawyers, to update Council accordingly.

Respectfully,



Report prepared and submitted by:

Shawn Persaud, BA, MCIP, RPP
Director of Planning and Development



Tim Leitch, P. Eng.
Director of Public Works



Financial Implications Reviewed By:

Haley Leblond, Acting Director of Finance



Report Approved By:

Tim Leitch, Acting Chief Administrative Officer

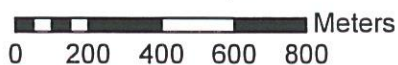
Attachments:

- Appendix 1: Subject Property Map
 - Appendix 2: CRH Response to Township Comments
 - Appendix 3: SSEA Peer Review Letter
 - Appendix 4: Burnside Peer Review Letter
 - Appendix 5: Draft Letter from the Township
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Scale: 1:20,000



Date Printed: 12-20-19

Legend

- Existing Gravel Pit
- Proposed Gravel Pit
- Parcel Fabric





KITCHENER
WOODBRIDGE
LONDON
KINGSTON
BARRIE
BURLINGTON

September 14, 2020

Mr. Brent Armstrong
Integrated Aggregate Operations Section
Ministry of Natural Resources and Forestry
4th Floor South, 300 Water Street
Peterborough, ON K9J 3C7

Mr. Shawn Persaud
Township of Tiny
130 Balm Beach Road
Tiny, ON L0L 2J0

Dear Mr. Armstrong & Mr. Persaud:

RE: Teedon Pit Extension (No. 625375) – Updated ARA Site Plans
North ½ of Lot 80, Concession 1, W.P.R & Part of Original Road Allowance between Lots 80
& 81, Concession 1, W.P.R, Township of Tiny, County of Simcoe - OUR FILE 9061CZ

Please find enclosed an updated set of Aggregate Resources Act ("ARA") Site Plans for the proposed Teedon Pit extension, dated September 2020. These plans supersede the version of the ARA Site Plans dated January 2019, and all revisions have been identified in red to assist with MNRF and the Township of Tiny's review.

The changes identified on the enclosed set of Site Plans include the site plan revisions requested by the Township of Tiny in their January 29, 2020 letter to MNRF and CRH. For your convenience attached is a copy. It is our understanding that these revisions now resolve all of the Townships of Tiny Staff's concerns with the proposed site plans.

Should you have any questions do not hesitate to contact with the undersigned.

Yours truly,

MHBC

Brian Zeman, BES, MCIP, RPP
President

cc. Kevin Mitchell | CRH
Jessica Ferri | CRH
Gary Lagos | GHD
Richard Murphy | GHD
Anthony Goodban | GEC
Chris Quinke | Theakston Environmental
Stephen Pollock | Theakston Environmental

Attachments – Township of Tiny Letter to CRH and MNRF dated January 29, 2020



January 29, 2020

Ministry of Natural Resources and Forestry
2284 Nursery Road
Midhurst, ON L9X 1N8
Attention: Robert Herbst (robert.herbst@ontario.ca)

CRH Canada Group Inc.
2300 Steeles Avenue West, 4th Floor
Concord, ON L4K 5X6
Attention: Jessica Ferri (Jessica.ferri@ca.crh.com)

**RE: Aggregate Resource Act Application – Teedon Pit Extension
Township of Tiny Updated Comments
North Part of Lot 80, Concession 1 O.S. (Roll #1-029-00)**

Thank you for the opportunity to provide updated comments on the proposed Teedon Pit Extension Application under the *Aggregate Resources Act* (ARA).

The Township submitted an objection letter dated March 25, 2019, on the ARA application. The letter focused on comments in the following areas: hydrogeological, traffic, noise, site operation, and natural heritage.

The Township has been reviewing and commenting on all new submission material from the applicant in their effort to address the Township's objection comments. The Township has retained R. J. Burnside & Associates Limited (Burnside), Aercoustics Engineering Limited (Aercoustics), and the Severn Sound Environmental Association (SSEA) to peer review all technical material in support of the application.

Confidential Planning & Development Report PD-004-20 regarding the Teedon Pit Extension Application was presented to Council at the Committee of the Whole meeting dated January 13, 2020. This report provides the background relative to the Township's review of the application and the current status of comments. As a result of this Report, Council Motion #022/20 was approved and reads:

"WHEREAS Council reconsidered Confidential Planning and Development Report PD-004-20 regarding the Teedon Pit Extension Application;

NOW THEREFORE BE IT RESOLVED THAT staff be directed to proceed with the recommendations in PD-004-20;

AND FURTHER THAT staff include the following comments in the letter to the Ministry of Natural Resources and Forestry and CRH Canada Group Inc;

1. That the Township is fundamentally opposed to the extraction and washing of aggregate in environmentally sensitive areas.
2. That there is presently a groundwater study being undertaken by Dr. Cherry, et al and that the findings of this report be taken into consideration by the Province prior to the issuance of any further licenses.

AND FURTHER THAT Report PD-004-20 and Closed Session Meeting Minutes dated January 13, 2020, as approved, and January 27, 2020, once approved, be made public in nature."

Council Motion #022/20 and Planning & Development Report PD-004-20 are attached to this letter for your information.

Although the majority of the Township's comments have been addressed, the Township is not satisfied that all matters related to this proposal have been satisfactorily dealt with for the reasons stated in this letter.

This letter has been divided into five main theme areas: hydrogeological, traffic, noise, site operation, and natural heritage.

HYDROGEOLOGICAL COMMENTS

The Township's concerns regarding hydrogeology have been addressed. CRH has committed to making the following amendments to the proposed Teedon Pit Extension Site Plans:

- Revising Note #42 on the Operational Plan to reflect the Township's request to have AWLRs loggers installed and for the wells to be monitored monthly.
- Revising Note #42 and the monitoring well schematic on the Operational Plan to include the additional note: "One year prior to extraction commencing, two additional monitoring wells shall be installed. One between MW9-18 and MW8-18 and the second shall be installed along the eastern edge of the extraction area."

TRAFFIC COMMENTS

Burnside has completed a peer review of the Traffic Impact Study (TIS) prepared by C.F. Crozier & Associates Inc, dated October 4, 2019. The Township's concerns regarding traffic have not been addressed as follows:

- The CRH response notes that "No Stopping" signs will be installed on Darby Road, together with OPP enforcement, if required. In addition, CRH has confirmed that communication will be made to drivers/clients to prevent arrivals outside of the operating hours of the pit. We have assumed the OPP enforcement of "No Stopping" would be paid for by CRH. The Township requests that the TIS include the documented CRH policy and procedures to prevent the arrivals and parking of trucks prior to 5 am. This should be made available should a complaint come to the Township so a documented follow up be provided.
- The traffic counts that were used for the traffic operational analysis (i.e., Level of Service, Left Turn Lane Warrant analysis) do not capture the traffic from the Pit Extension. The peak hour counts on Darby Road do not show any heavy trucks during the peak hours analyzed. Considering that CRH has acknowledged that there have been 40 two-way truck trips during peak hours and that this will be the maximum in any given hour, a sensitivity analysis should be provided in the TIS to consider this maximum. This may impact the external road improvements required on both Darby Road and Highway 93. The TIS proposes widenings along Darby Road and a recovery taper along Highway 93 to facilitate turning movements at the intersection of Darby Road / Highway 93. The Township requests that:

- a sensitivity analysis be provided in the TIS to consider this maximum. This may impact the external road improvements required on both Darby Road and Highway 93;
 - comments / approvals be provided from the Ministry of Transportation (MTO) for the TIS and proposed highway improvements;
 - CRH enter into a Road Improvement Agreement for Darby Road with the Townships of Tiny and Tay, which would include, but not be limited to, detail engineering design drawings and securities.
-
- The TIS concludes that left turn lane warrants are not met on Highway 93, based on the low percentages of left turn movements at the intersection of Darby Road / Highway 93. The analysis should be based on equivalent cars (i.e., factor of 2 for large trucks), together with a more realistic estimate of peak period turns that may be generated from the pit. Left turn lane warrants may be met under such conditions. The Township requests that the TIS include an analysis based on equivalent cars (i.e., factor of 2 for large trucks).

NOISE COMMENTS

The Township's concerns regarding noise have been addressed. CRH has committed to making the following amendments to the proposed Teedon Pit Extension Site Plans:

- To include the equipment list and its associated maximum sound power under the section titled "Equipment to be used Onsite and Noise/Air Mitigation". In addition, this equipment list and sound power readings are identified in Section 2.0 of the Acoustical Assessment Report.

In addition, CRH noted that they had submitted a minor site plan amendment to the MNRF to permit the construction of the acoustic berms and restrict the location of the genset trailer on-site so that this can be completed immediately. Confirmation from MNRF in this regard is requested by the Township to confirm that this has been completed.

SITE OPERATION

The Township's concerns regarding site operations have been addressed. CRH has committed to making the following amendments to the proposed Teedon Pit Extension Site Plans:

- Revising the proposed Site Plans to prohibit the storage of asphalt in the extension.
- Revising the Operational Plan add a new note to the rehabilitation page to state that "no fill shall be imported and disposed of at the site other than to establish slopes as specified in the Rehabilitation Plan."

NATURAL HERITAGE COMMENTS

The Township's concerns regarding natural heritage have been addressed. CRH has committed to making the following amendments to the proposed Teedon Pit Extension Site Plans:

- Revising the Operational Plan to change the word "should" to "shall" in the proposed note, i.e.: "The forest edge management zones shall be monitored for survival in the first, second and fifth years after planting. Replacement planting shall be undertaken if survival is less than 60% for each species."

- Revising the Operational Plan to add a note to the Forest Edge Management Schematic: "The proposed forest edge management measures within forest edge management zones 'A' AND 'B' will commence within three (3) years of the license issuance."
- Revising the Operational Plan to add a general note regarding invasive species monitoring and control: "Prior to and during extraction, the extraction area and immediately adjacent lands owned by CRH Canada Group Inc. will be periodically monitored for the presence of invasive plant species. Control measures will be implemented as required under the direction of a qualified ecologist. Control measures may include cutting woody stems and treating stumps with herbicide, spot application of herbicide to control newly established invasive species and/or use of tarps/covers to kill off invasive groundcover species."
- Revising Note #4 on the Rehabilitation Plan to say "... or another appropriate species recommended by a qualified ecologist at the time of planting."
- Revising Note #7 on the Rehabilitation Plan to include survival assessment at year five (5) in addition to years one (1) and two (2), and that the note will be modified to require 60% survival of each species.

In addition, the Council for the Township of Tiny, approved the following additional comments by way of Motion #022/20:

- That the Township is fundamentally opposed to the extraction and washing of aggregate in environmentally sensitive areas.
- That there is presently a groundwater study being led by Dr. John Cherry from the University of Guelph and that the findings of this report be taken into consideration by the Province prior to the issuance of any further licenses.

Sincerely,

THE CORPORATION OF THE TOWNSHIP OF TINY

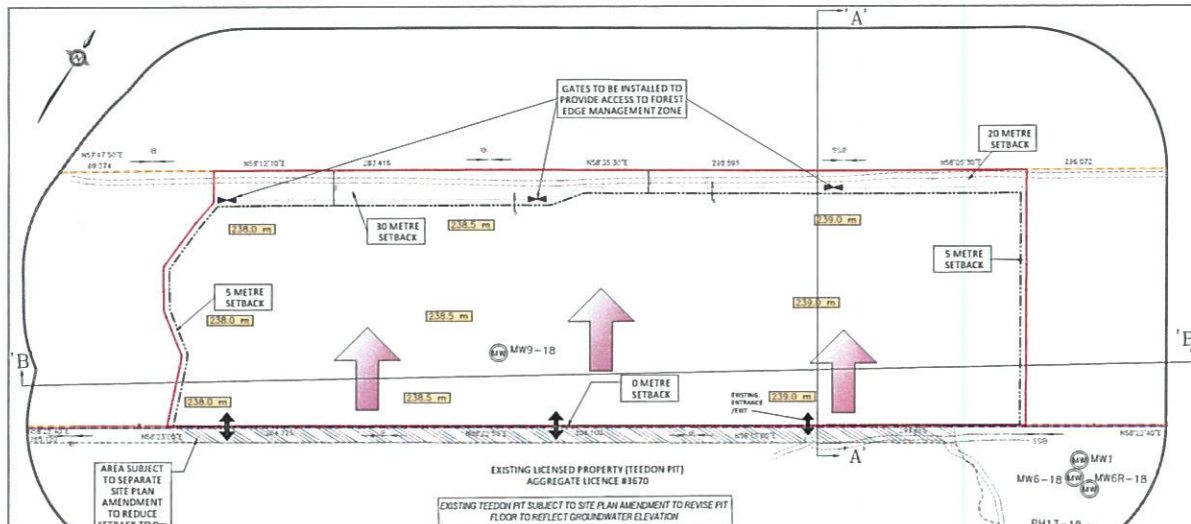


Shawn Persaud, BA, MCIP, RPP,
Director of Planning & Development



Tim Leitch, P. Eng.
Director of Public Works

CC: Members of Council
Doug Luker, CAO for the Township of Tiny (dluker@tiny.ca)
Sue Walton, Director of Legislative Services/Clerk for the Township of Tiny (swalton@tiny.ca)
David Parks, Director Planning, Development and Tourism (David.Parks@simcoe.ca)
Cecil Gratrix, R. J. Burnside & Associates (Cecil.Gratrix@riburnside.com)
Julie Cayley, Severn Sound Environmental Association (JCayley@severnsound.ca)
Hon. Bruce Stanton, MP, North Simcoe (bruce.stanton@parl.gc.ca)
Hon. Jill Dunlop, MPP, Simcoe North (jill.dunlopco@pc.ola.org)



SITE AREA CALCULATIONS

1. AREA TO BE LICENSED: 10.3 HA

2. AREA TO BE EXTRACTED: 13.5 HA

MAXIMUM TONNAGE OF MATERIAL TO BE REMOVED FROM THE LICENSED PROPERTY

1. THE MAXIMUM ANNUAL TONNAGE TO BE REMOVED FROM THIS SITE IS 8000 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 8:00 AM TO 4:00 PM AND SATURDAY 8:00 AM TO 12:00 PM

(B) SITE PREPARATION, EXTRACTION, PROCESSING, AND REHABILITATION: MONDAY TO FRIDAY 8:00 AM TO 4:00 PM

(C) EXTRACTION AND PROCESSING: SATURDAY 8:00 AM TO 4:00 PM

(D) THERE WILL BE NO OPERATIONS ON SUNDAYS OR STATUTORY HOLIDAYS

(E) MAINTENANCE: SERVICES EQUIPMENT - NO RESTRICTIONS

LICENSED AREA BOUNDARY - FENCING

1. 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.

2. AFTER TREE CLEARING ALONG THE BOUNDARY OF THE SITE AND PRIOR TO THE STARTING OF TOPSOIL/UNDERBURN, A 1.2m FENCE SHALL BE INSTALLED ALONG THE EAST AND WEST LICENSED BOUNDARY AND 50m NORTH OF THE NORTHERN EXTRACTION LIMIT. FENCING WILL NOT BE REQUIRED FOR THE SOUTHERN BOUNDARY. FENCING SHALL BE PLACED ALONG THE BOUNDARY AT 30m ± INTERVALS TO IDENTIFY THE LICENSED BOUNDARY LIMITS. SEE EXTRACTION SCHEMATIC FOR FENCING DETAILS AND SITE PLAN OVERLAYS 1.1.

TREE REMOVAL

7. WITHIN THREE (3) YEARS OF LICENCE ISSUANCE AND PRIOR TO EXTRACTION COMMENCING THE FOLLOWING 15m WIDE STRIP OF TREE SHALL BE REMOVED TO PRE-DEFINE THE NEW FOREST EDGE THAT WILL BE CREATED:

(A) TREES 25m BEYOND THE EXTRACTION AREA (E.G. 15m SETBACK AREA) SHALL BE CLEARED OF TOPSOIL/UNDERBURN. A QUALIFIED ECOSYSTEM ECOLOGIST OR FORESTER SHALL PREPARE A REPORT DOCUMENTING THE REMOVAL OF THE FOREST EDGE MANAGEMENT PLAN. THE REPORT SHALL BE SUBMITTED TO THE MINISTRY OF NATURAL RESOURCES AND FORESTRY (MNR).

(B) WITHIN THE EXTRACTION AREA A 15m WIDE AREA OF TREES ALONG THE WEST, NORTH AND EAST LIMITS OF EXTRACTION SHALL BE REMOVED.

(C) ALL REMAINING TREES WITHIN THE EXTRACTION AREA SHALL BE GRADUALLY CUT. CLEARED WOODS OF EXTRACTIVE OPERATIONS. TREE CLEARING SHALL OCCUR AS REQUIRED TO ADVANCE EXTRACTION AND MINIMIZE THE DISTURBED AREA.

8. TREE CUTTING IN TREE CLEARING ZONE 2 SHALL OCCUR BETWEEN NOVEMBER 1ST AND MARCH 31ST EXCLUSIVE.

9. TREE CUTTING IN TREE CLEARING ZONE 2 SHALL OCCUR BETWEEN NOVEMBER 1ST AND JANUARY 31ST EXCLUSIVE.

10. BURNABLE TREES WILL BE HARVESTED FOR BARK LOGS AND PULP WOOD. STUMPS AND OTHER WOODS REMOVED (WASTE WOODS) SHALL BE REMOVED FROM THE SITE OR CHIPPED ON SITE TO BE CHIPPED OR BURNED IN THE SIDE SLOPE.

11. TREE CLEARING SCHEMATIC: THIS PAGE FOR TREE REMOVAL LOCATIONS TO PRE-DEFINE THE NEW FOREST EDGE AND TRAIL RESTRICTIONS.

FOREST EDGE MANAGEMENT

12. PRIOR TO THE FOREST EDGE EXTRACTION THE EXTRACTION AREA AND ADJACENTLY ADJACENT LANDS OWNED BY OR CANADA GROUP INC. WILL BE REHABILITATED TO THE FOREST EDGE MANAGEMENT PLAN. THE REHABILITATION CONTROL MEASURES WILL BE IMPLEMENTED TO REQUIRE UNDER THE DIRECTION OF A QUALIFIED ECOSYSTEM ECOLOGIST. MEASURES MAY INCLUDE:

CUTTING WOODS: STEMS AND TREES TRUNKS WITH HERBICIDE: SPOT APPLICATION OF HERBICIDE TO CONTROL NEARBY EXISTING INVASIVE SPECIES AND/OR USE OF HERBICIDE TO KILL OFF INVASIVE UNDERGROWTH SPECIES.

13. FOLLOWING TREE CUTTING ALONG THE BOUNDARY OF THE SITE, A QUALIFIED ECOSYSTEM ECOLOGIST OR FORESTER SHALL PREPARE A REPORT DOCUMENTING THE REMOVAL OF THE FOREST EDGE MANAGEMENT PLAN. THE REPORT SHALL BE SUBMITTED TO THE MINISTRY OF NATURAL RESOURCES AND FORESTRY (MNR).

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 ECOSYSTEM 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).

STEPS OF TOPSOIL/UNDERBURN

17. TOPSOIL AND UNDERBURN SHALL BE STRIPPED AND STORED SEPARATELY. TOPSOIL AND UNDERBURN 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 SITE

18. ACCESS TO THE PIT WILL BE THROUGH THE ADJACENT TEEDON PIT LICENSE #3670 FROM THE ENTRANCE ON DARTY ROAD. THE ENTRANCE TO DARTY ROAD SHALL BE GATED AND LOCKED WHEN THE PIT PROPERTIES ARE NOT IN USE.

19. EQUIPMENT AND TRUCKS MAY ACCESS THE SITE ALONG THE COMMON EXTRACTION BOUNDARY OF THE ADJACENT TEEDON PIT LICENSE #3670.

20. AGGREGATE FROM THE PIT MAY ALSO BE TRANSPORTED TO THE ADJACENT TEEDON PIT LICENSE #3670 FOR PROCESSING AND WASHING.

EXTRACTION

21. THE ELEVATION OF THE ESTABLISHED WATER TABLE RANGES ON SITE FROM 4.2m BGL TO 4.1m BGL. THE MAXIMUM DEPTH OF EXTRACTION IS TO REMAIN 1m ABOVE THE ESTABLISHED WATER TABLE BASED ON CHANGING MOISTURE CONTENT.

22. DUE TO THE DEPTH OF THE EXTRACTION THE EXTRACTION PIT SHALL BE EXCAVATED IN ONE PHASE.

23. EXTRACTION WILL ADVANCE GENERALLY IN A SOUTH TO NORTH DIRECTION FROM THE ADJACENT TEEDON PIT LICENSE #3670.

24. THE PIT SHALL BE EXCAVATED UP TO 15m DEPTH. SEE PAGE 4 OF A. THE PIT SHALL NOT EXCEED THE REGULATIONS DETERMINED BY THE MINISTRY OF NATURAL RESOURCES AND FORESTRY (MNR).

25. AS EXTRACTION PROGRESSES NORTH FACE RANGES ON EACH LOT (APPROXIMATELY 15m IN HEIGHT) SHALL BE MAINTAINED AT THE EAST AND WEST LIMITS AND MAY BE REMOVED AS PART OF THE FINAL EXTRACTION OF EACH LOT AFTER THE PROCESSING PLANT IS RELOCATED TO THE NEXT LOWER LOT.

EQUIPMENT TO BE USED ON SITE AND MOBILE LAMP INSTALLATION

26. SEVERAL TYPES OF EQUIPMENT TO BE USED IN THE OPERATION OF THE PIT WILL INCLUDE BUT NOT BE LIMITED TO MAINTENANCE, EXCAVATORS, CRANES, TRUCKS, TRAILERS AND PORTABLE CHIPPING/SCREENING PLANTS AND CONVEYORS.

NAME	PIN# (DNR)	NAME	PIN# (DNR)
GRIPPER (LONG REACH)	111.9	CLINIC FOR LIFT (MACH. PLANT)	110.3
CONE CRUSHER	114.3	TRAILER (DRUM) PLANT	110.3
TRAILER (SCREEN)	111.2	PLANT (TRAILER)	110.3
TRAILER (DRUM)	111.2	TRAILER (DRUM) PLANT	110.3
TRAILER (SCREEN)	111.2	TRAILER (DRUM) PLANT	110.3
TRAILER (DRUM)	111.2	TRAILER (DRUM) PLANT	110.3
TRAILER (SCREEN)	111.2	TRAILER (DRUM) PLANT	110.3
TRAILER (DRUM)	111.2	TRAILER (DRUM) PLANT	110.3
TRAILER (SCREEN)	111.2	TRAILER (DRUM) PLANT	110.3
TRAILER (DRUM)	111.2	TRAILER (DRUM) PLANT	110.3

27. ANY CONSTRUCTION EQUIPMENT USED TO PREPARE THE SITE, SUCH AS EXCAVATORS, MUST COMPLY WITH MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS PUBLICATION MPC 115.

28. THE PORTABLE CHIPPING PLANT IS TO BE SITUATED WITHIN 50m OF THE WESTERN WINDING FACE DURING THE FIRST LOT. WHEN WITHIN 20m OF THE WESTERN LIMIT OF EXTRACTION, IN ORDER TO MAINTAIN SOUND ATTENUATION.

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

30. THE GENSET TRAILER FOR THE PROCESSING PLANT NEEDS TO BE OPERATED WITHIN THE HOURS OF 10:00 AM AND 7:00 PM HOURS ONLY. SHIPPING IS PERMITTED AND MAY INCLUDE A MAXIMUM OF 15 MPM/HOUR TRUCKS PER HOUR IN COMBINATION WITH THE EXISTING TEEDON PIT LICENSE #3670.

31. BETWEEN THE HOURS OF 10:00 AM AND 7:00 PM HOURS ONLY, SHIPPING IS PERMITTED AND MAY INCLUDE A MAXIMUM OF 15 MPM/HOUR TRUCKS PER HOUR IN COMBINATION WITH THE EXISTING TEEDON PIT LICENSE #3670.

32. DUST SHALL BE MITIGATED ON SITE.

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

34. PROCESSING EQUIPMENT WILL BE EQUIPPED WITH DUST SUPPRESSORS OR COLLECTION DEVICES. WHERE THE EQUIPMENT CREATES DUST AND IS BEING OPERATED WITHIN 50m OF A SENSITIVE RECEPTOR.

35. THE OPERATOR SHALL RESPOND TO OBJECTIONS CONCERNING DUST OR THE PORTION OF THE OPERATION RELATING TO THE SENSITIVE RECEPTOR. THE PORTION OF THE OPERATION RELATING TO THE SENSITIVE RECEPTOR SHALL BE DETERMINED BY THE MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS. FURTHER MITIGATION MEASURES AND MONITORING SHALL BE IMPLEMENTED.

36. SHOULD IT BE DETERMINED THAT NOISE OR AIR VIBRATIONS UNDER THE ENVIRONMENTAL PROTECTION ACT ARE OCCURRING FROM PIT OPERATIONS, THE PORTION OF THE OPERATION RELATING TO THE SENSITIVE RECEPTOR SHALL BE DETERMINED BY THE MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS. FURTHER MITIGATION MEASURES AND MONITORING SHALL BE IMPLEMENTED.

FUEL HANDLING, STORAGE AND SERVICES

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

BUILDINGS/STRUCTURES

38. NO BUILDINGS OR OTHER STRUCTURES (E.G. WOOD SHEDS) WILL BE PLACED ON THE LICENSED PROPERTY.

SCAFFOLD

39. NO SCAFFOLD SHALL BE STORED ON SITE.

STOCKPILES 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. SLOTTED PITS WILL BE INSTALLED 5m BEYOND THE WEST, NORTH AND EAST EXTRACTION LIMIT AND MAINTAINED WHILE TREE CLEARING IS OCCURRING.

WATER MONITORING

42. ONE YEAR PRIOR TO EXTRACTION COMMENCING, TWO ADDITIONAL MONITORING AREAS SHALL BE ESTABLISHED: ONE BETWEEN 15m AND 30m BEYOND THE EXTRACTION AREA AND ONE BETWEEN 30m AND 45m BEYOND THE EXTRACTION AREA. MONITORING AREAS SHALL BE MAINTAINED THROUGHOUT EXTRACTION. MONITORING AREAS SHALL BE EQUIPPED WITH PULSATILE WATER LEVEL RECORDERS (WLR). THE LOCATION OF MONITORING WELLS ON MONITORING WELL SCHEMATIC THIS PAGE.

43. 6MM BGL 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 SETBACK.

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 46 (1) OF THE ONTARIO HERITAGE ACT. THE PERSON DISCOVERING THE ARCHAEOLOGICAL RESOURCES MUST CEASE ALL ACTIVITIES OF THE AFFECTED AREA IMMEDIATELY AND ENGAGE A LICENSED CONSULTANT ARCHAELOGIST TO CARRY OUT ARCHAEOLOGICAL PRELIMINARY COMPLIANCE WITH SECTION 46 (1) OF THE ONTARIO HERITAGE ACT.

47. THE CEMETERY ACT REQUIRES THAT ANY PERSON DISCOVERING HUMAN REMAINS MUST NOTIFY THE POLICE OR CORNER AND THE REGISTAR OF CEMETERIES, MINISTRY OF GOVERNMENT AND COMMUNITARIAN SERVICES.

IMPORTED MATERIALS

48. AGGREGATE MAY BE IMPORTED ONTO THE LICENSED PROPERTY FOR PROCESSING AND BLINDING WITHIN THE LICENSED AREA.

49. THE STORAGE OF IMPORTED MATERIALS SHALL BE IMPLEMENTED ON SITE.

50. CROWN RIGHT FILL MAY BE IMPORTED TO FACILITATE THE ESTABLISHMENT OF 5:1 HORIZONTAL VERTICAL SLOPES ON THE FINAL PIT FACES. SEE PAGE 4 OF A. 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 SOIL, SAND, GRAVEL AND AGGREGATE STANDARDS FOR USE UNDER PART IV OF THE ENVIRONMENTAL PROTECTION ACT. SHIPPING RESULTS TO BE PROVIDED TO THE MINISTRY OF NATURAL RESOURCES AND FORESTRY OF THE MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS UPON REQUEST.

51. NOTWITHSTANDING THE ABOVE, WHERE THE IMPORTED MATERIAL IS NOT BEING PLACED WITHIN 15 METRES OF THE SURFACE, THE CRITERIA UNDER THE SOIL, SAND, GRAVEL AND AGGREGATE STANDARDS AND ELECTRICAL CONDUCTIVITY MUST NOT BE MET.

52. NO FILL SHALL BE IMPORTED AND DISPOSED OF AT THE SITE OTHER THAN TO TOPSOIL/UNDERBURN 1.5m ± DEPTH OF THE REHABILITATION PLAN.

SOILS DESCRIPTION PLAN

53. ALL EMPLOYEES AND CONTRACTORS MUST OBEY THE FOLLOWING INSTRUCTIONS WHEN HANDLING POTENTIAL CONTAMINANTS ON THE LICENSED PROPERTY:

54. ALL EMPLOYEES AND CONTRACTORS HANDLING LIQUID AND/OR POTENTIAL CONTAMINANTS WILL BE INSTRUCTED AS TO THE PROPER, SAFE HANDLING OF SUCH FLUIDS/CONTAMINANTS.

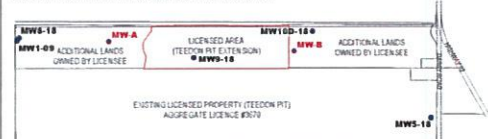
55. POTENTIAL CONTAMINANTS (E.G. FUEL) WILL BE STORED AND HANDLED AS REQUIRED BY PROVINCIAL LEGISLATION.

56. ALL REPORTABLE SPILLS OR RELEASES OF CONTAMINANTS MUST BE CLEANED UP IMMEDIATELY AND REPORTED TO THE MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS SPILLS ACTION CENTRE BY TELEPHONE AT 1-800-268-8868.

57. ALL SPILLS OR RELEASES OF CONTAMINANTS MUST BE IMMEDIATELY REPORTED TO THE MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS SPILLS ACTION CENTRE BY TELEPHONE AT 1-800-268-8868.

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

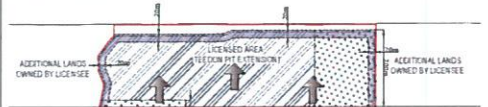
MONITORING WELL SCHEMATIC



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)

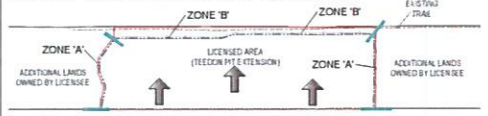
■ TREE CLEARING ZONE 2' (NOV 1ST - MAR 31ST)

1. WITHIN THREE (3) YEARS OF LICENCE ISSUANCE, TREES 5m BEYOND THE EXTRACTION AREA SHALL BE CLEARED (BUT NOT GRUBBED).

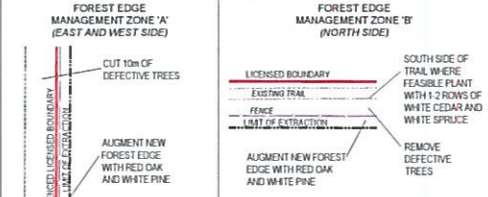
2. WITHIN THREE (3) YEARS OF LICENCE ISSUANCE, AN ADDITIONAL 15m WIDE AREA SHALL BE CLEARED OF TREES ALONG THE WEST, NORTH AND EAST EDGES OF THE EXTRACTION AREA.

3. AS EXTRACTION PROGRESSES NORTH TREE CLEARING SHALL OCCUR AS REQUIRED TO ADVANCE EXTRACTION AND MINIMIZE THE DISTURBED AREA.

FOREST EDGE MANAGEMENT SCHEMATIC



THE PROPOSED FOREST EDGE MANAGEMENT MEASURES WITHIN FOREST EDGE MANAGEMENT ZONES 'A' AND 'B' WILL COMMENCE WITHIN THREE (3) YEARS OF THE LICENCE ISSUANCE.



48. BURNABLE TREES SHALL BE HARVESTED FOR BARK LOGS AND PULP WOOD. STUMPS AND OTHER WOODS REMOVED (WASTE WOODS) SHALL BE REMOVED FROM THE SITE OR CHIPPED ON SITE TO BE CHIPPED OR BURNED IN THE SIDE SLOPE.

49. TREE CLEARING SCHEMATIC: THIS PAGE FOR TREE REMOVAL LOCATIONS TO PRE-DEFINE THE NEW FOREST EDGE AND TRAIL RESTRICTIONS.

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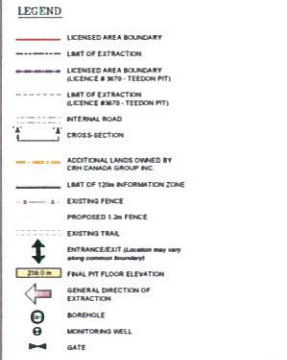
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SITE PLAN OVERRIDES

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

STANDARD	OVERLAP 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 LICENSE # 3670 WILL NOT BE GATED. THE ENTRANCE TO THE TEEDON PIT PROPERTY FROM DARTY ROAD IS GATED.
5.10	NO EXCAVATION SETBACK WILL EXIST ALONG THE SOUTH LICENSED BOUNDARY ADJACENT TO THE TEEDON PIT LICENSE # 3670.
5.11	THE EXCAVATION SETBACK ALONG THE WEST AND EAST BOUNDARIES IS 5m FROM THE LICENSED BOUNDARY. OVERBURNED, TOPSOIL AND AGGREGATE CAN BE STOCKPILED WITHIN 30m OF THE SOUTHERN BOUNDARY ADJACENT TO THE TEEDON PIT LICENSE # 3670.
5.15/17	THE PORTABLE PROCESSING PLANT MAY BE LOCATED WITHIN 30m OF THE SOUTHERN BOUNDARY ADJACENT TO THE TEEDON PIT LICENSE # 3670.
5.22	TREES AND UNDERBURN MAY BE MOVED BETWEEN THIS SITE AND THE ADJACENT TEEDON PIT LICENSE # 3670 TO PROVIDE TIMELY AND EFFECTIVE REHABILITATION OF BOTH PITS. THE AGGREGATE RESOURCES ACT SIGN FOR THE SITE WILL BE LOCATED AT THE DARTY ROAD ENTRANCE OF THE ADJACENT TEEDON PIT LICENSE # 3670 SINCE THE LICENSED BOUNDARY DOES NOT HAVE FRONTAGE ONTO ANY PUBLIC ROADS.

48. BURNABLE TREES SHALL BE HARVESTED FOR BARK LOGS AND PULP WOOD. STUMPS AND OTHER WOODS REMOVED (WASTE WOODS) SHALL BE REMOVED FROM THE SITE OR CHIPPED ON SITE TO BE CHIPPED OR BURNED IN THE SIDE SLOPE.

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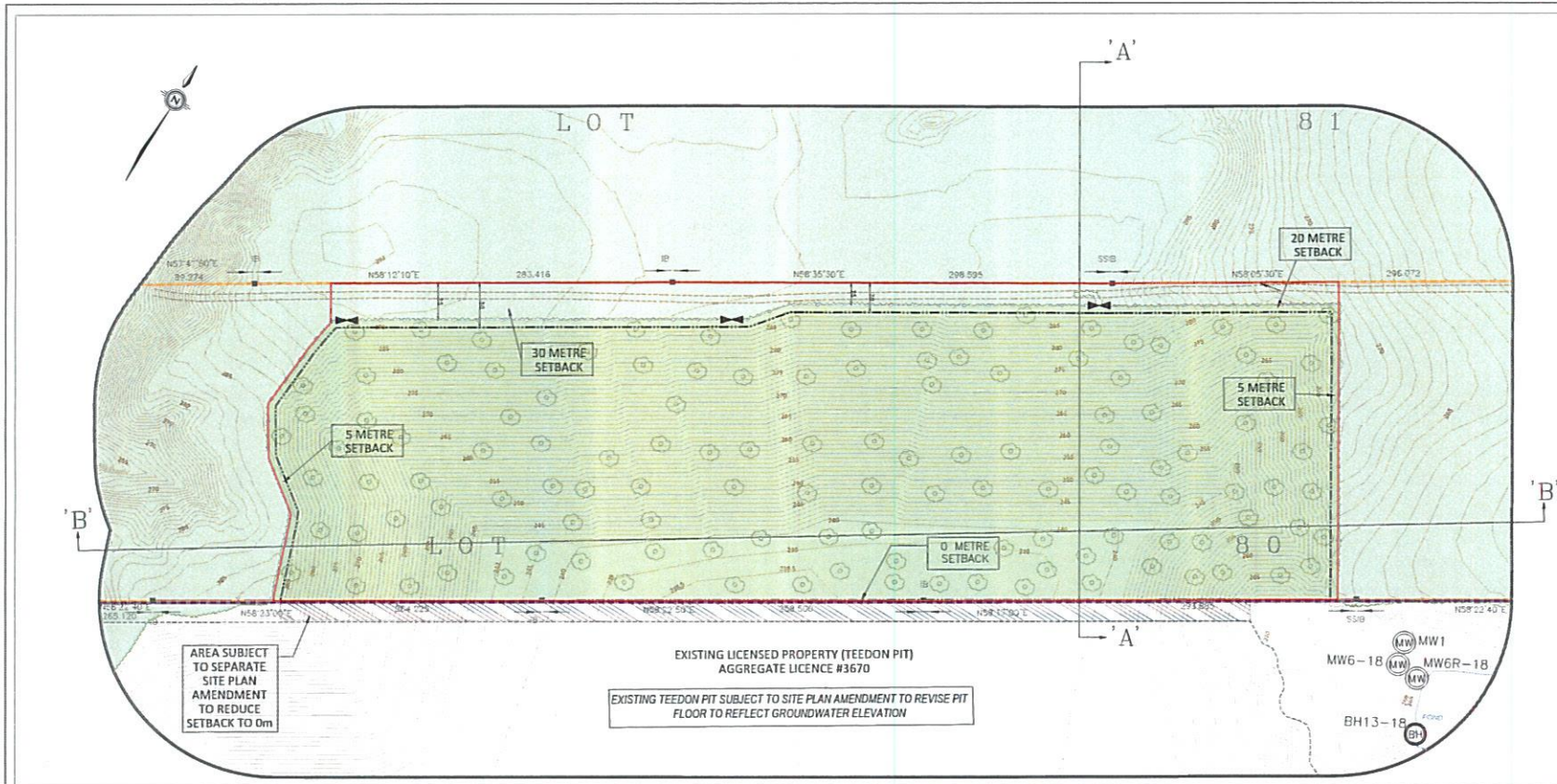
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LEGEND

- LICENSED AREA BOUNDARY
- - - - - LIMIT OF EXTRACTION
- - - - - LICENSED AREA BOUNDARY (LICENCE # 8070 - TEEDON PIT)
- - - - - LIMIT OF EXTRACTION (LICENCE # 8070 - TEEDON PIT)
- - - - - CROSS SECTION
- - - - - ADDITIONAL LANDS OWNED BY CH2M CANADA GROUP INC.
- - - - - LIMIT OF 120m INFORMATION ZONE
- - - - - EXISTING TRAIL
- - - - - CONTOUR LINE
- - - - - EXISTING FENCE
- - - - - 1.2m FENCE
- - - - - BORDHOLE
- - - - - MONITORING WELL
- - - - - GATE
- - - - - EXISTING VEGETATION
- - - - - PROPOSED FORESTED AREA (SEE TREE PLANTING SCHEMATIC ON THIS PAGE)

SITE PLAN OVERRIDES

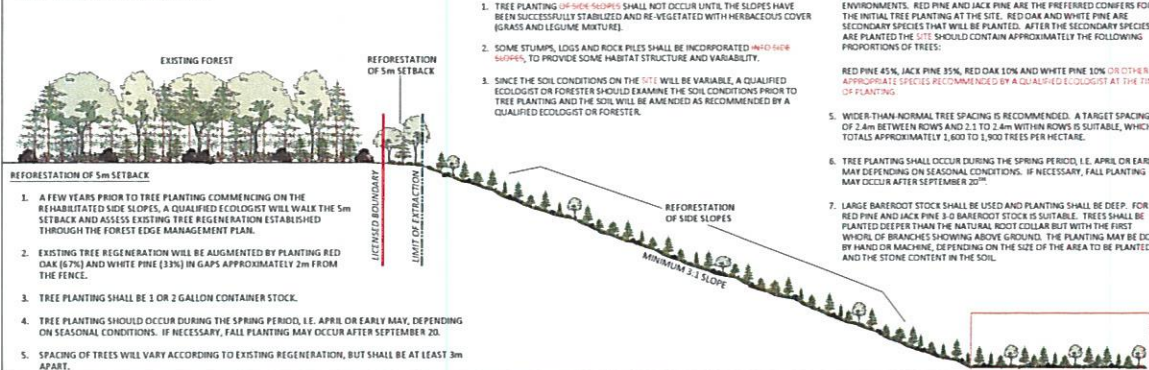
THE FOLLOWING CONDITIONS ILLUSTRATED ON THIS PLAN VARY FROM THE REQUIREMENTS OF THE PROVINCIAL STANDARDS THAT APPLY TO LICENSED PITS IN ONTARIO

STANDARD	OVERRIDE DESCRIPTION
5.1	A PORTION OF THE LICENSED BOUNDARY IS NOT REQUIRED TO BE FENCED. SEE NOTES 5 & 6 (SEE PAGE 3 OF 4)
5.2	THE ENTRANCE ONTO THE LICENSED PROPERTY FROM THE TEEDON PIT PROPERTY BOUNDARY # 8070 WILL NOT BE GATED. THE ENTRANCE TO THE TEEDON PIT PROPERTY FROM DABBY ROAD IS GATED.
5.10	NO EXCAVATION SETBACK WILL EXIST ALONG THE SOUTH LICENSED BOUNDARY ADJACENT TO THE TEEDON PIT BOUNDARY # 8070.
5.11	THE EXCAVATION SETBACK ALONG THE WEST AND EAST BOUNDARY IS 5m FROM THE LICENSED BOUNDARY. OVERBURDEN, TOPSOIL AND AGGREGATE CAN BE STOCKPILED WITHIN 30m OF THE SOUTHERN BOUNDARY ADJACENT TO THE TEEDON PIT BOUNDARY # 8070.
5.16/5.17	THE PORTABLE PROCESSOR PLANT MAY BE LOCATED WITHIN 30m OF THE SOUTHERN BOUNDARY ADJACENT TO THE TEEDON PIT BOUNDARY # 8070.
5.22	TOPSOIL AND OVERBURDEN MAY BE MOVED BETWEEN THIS SITE AND THE ADJACENT TEEDON PIT BOUNDARY # 8070 TO PROVIDE TIMELY AND EFFECTIVE REHABILITATION OF BOTH PITS.
5.22	THE AGGREGATE RESOURCES ACT SIGN FOR THE SITE WILL BE LOCATED AT THE DABBY ROAD ENTRANCE OF THE ADJACENT TEEDON PIT BOUNDARY # 8070 SINCE THE LICENSED BOUNDARY DOES NOT HAVE FRONTAGE ONTO ANY PUBLIC ROADS.

1. AREA TO BE REHABILITATED: 14.0 HA (EXTRACTION AREA AND 5m OF EXTRACTION SETBACK).
2. THE ELEVATION OF THE ESTABLISHED WATER TABLE RANGES ON SITE FROM ±236.5mASL TO ±237.5mASL.
3. PROGRESSIVE AND FINAL REHABILITATION OF THE DISTURBED AREA WILL BE COMPLETED AS EXTRACTION REACHES FINAL LIMITS AND DEPTHS.
4. 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.
5. 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.
6. THE PIT FLOOR SHALL BE GRADED AND CONTOURED AS SHOWN ON THIS PAGE AND TOPSOIL REAPPLIED AND PLANTED WITH SEED CONJUNCTIVE TO FORM CROPLAND THEREAFTER.
7. THE TREE PLANTING AREAS SHALL BE MONITORED FOR SURVIVAL IN THE FIRST AND SECOND AND EIGHTH YEARS AFTER PLANTING. REPLACEMENT PLANTING SHOULD BE UNDERTAKEN IF SURVIVAL OF EACH SPECIES 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).
8. PRIOR TO SURRENDER OF THE LICENCE A QUALIFIED ECOLOGIST OR FORESTER SHALL PREPARE A REPORT DOCUMENTING:
 - A) THE IMPLEMENTATION OF THE REFORESTATION PLAN;
 - B) TO ASSESS THE NEED FOR ANY STAND THINNING TO PROMOTE FURTHER NATIVE HARDWOOD REGENERATION; AND
 - C) 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 & PIT FLOOR

1. TREE PLANTING OF NEW SLOPES SHALL NOT OCCUR UNTIL THE SLOPES HAVE BEEN SUCCESSFULLY STABILIZED AND RE-VEGETATED WITH HERBACEOUS COVER (GRASS AND LEGUME MIXTURE).
2. SOME STUMPS, LOGS AND ROCK PILES SHALL BE INCORPORATED INTO NEW SLOPES, TO PROVIDE SOME HABITAT STRUCTURE AND VARIABILITY.
3. SINCE THE SOIL CONDITIONS ON THE SITE 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.
4. 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 SITE SHOULD CONTAIN APPROXIMATELY THE FOLLOWING PROPORTIONS OF TREES:
 - RED PINE 45%, JACK PINE 35%, RED OAK 10% AND WHITE PINE 10%. OTHER APPROPRIATE SPECIES RECOMMENDED BY A QUALIFIED ECOLOGIST AT THE TIME OF PLANTING.
5. 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.
6. 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.
7. 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.

PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE

MHBC

100 COLLEGE STREET, SUITE 100, L4M 1H6 | TEL: 709.780.0044 | FAX: 709.780.0010 | WWW.MHBC-CA.COM

TEEDON PIT EXTENSION

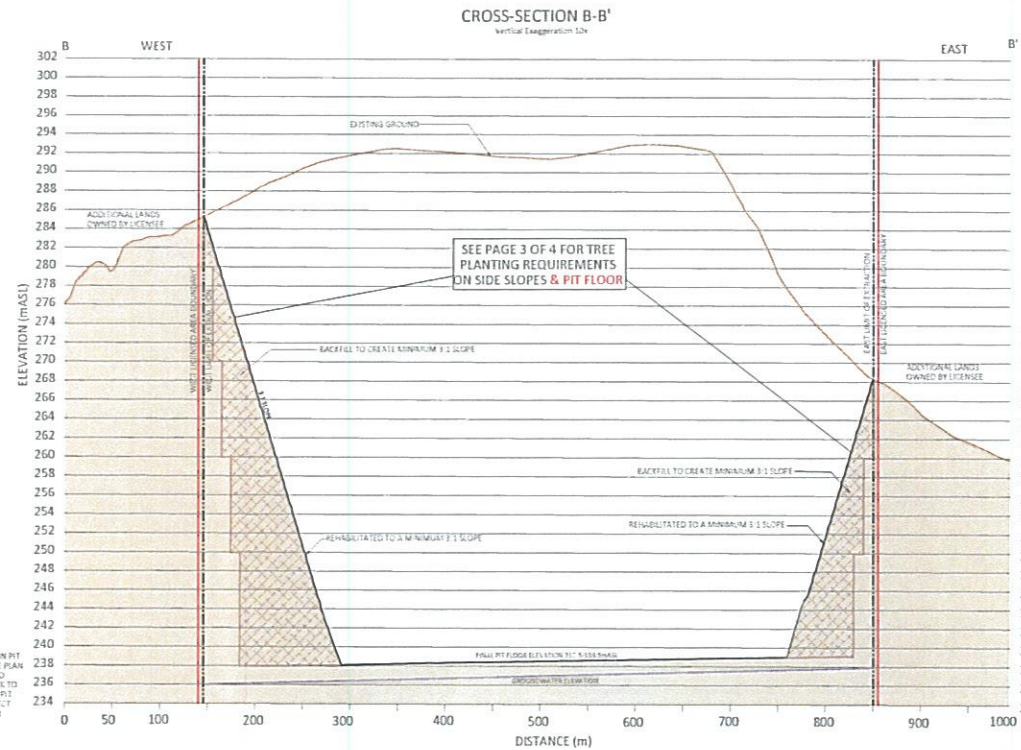
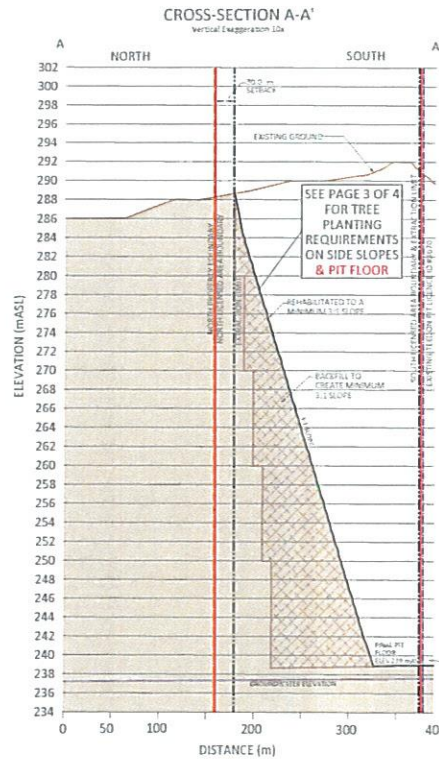
2 Dabby Road, Terry, ON L0K 2E1
North 1/2 of Lot 80 Concession 1, W.P.R. & Part of original road allowance between lots 80 & 81, Concession 1, W.P.R., Geographic Township of Terry, County of Simcoe

CEDARHURST QUARRIES & CRUSHING LIMITED
C/O CH2M CANADA GROUP INC.
2300 Steeles Avenue W, Suite 400
Concession, Ontario L6K 5G8

REHABILITATION PLAN

3 OF 4

- LEGEND**
- LICENSED AREA BOUNDARY
 - LIMIT OF EXTRACTION
 - LICENSED AREA BOUNDARY (SUSPENSE & WFO - TEEDON PIT)
 - ADDITIONAL LANDS OWNED BY CRH CANADA GROUP INC.
 - AREA TO BE BACKFILLED



Site Plan Amendments

No.	Date	Description	By

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
100 COLLEGE STREET SUITE 200 CH. LAK 100 1 781 233 2333 / 781 233 2333 / WWW.MHBC.COM

WFO Approved Stamp

TEEDON PIT EXTENSION
21 Darcy Road, Twp. CRH L2K 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 Twp. County of Simcoe

CEDARHURST QUARRIES & CRUSHING LIMITED
C/O CRH CANADA GROUP INC.
2300 Steeles Avenue W. Suite 400
Coquitlam, Ontario L4K 5S8

CROSS - SECTIONS
4 OF 4

Project No. 2016-01-01
Drawing No. 4 OF 4
Date: September 2020



Severn Sound Environmental Association

489 Finlayson St, PO Box 460, Port McNicoll ON L0K 1R0

Phone (705) 534-7283 | Fax (705) 534-7459

Email: MHudolin@severnsound.ca Website: www.severnsound.ca

October 2, 2020

Shawn Persaud
Director of Planning & Development
Corporation of the Township of Tiny
130 Balm Beach Road West
Tiny ON L0L 2J0

Dear Mr. Persaud,

RE: Review of updated ARA Site Plans, dated September 2020, for Proposed Teedon Pit Extension, Township of Tiny

In response to your request on September 15, 2020, the Severn Sound Environmental Association (SSEA) has reviewed the updated Site Plans for the proposed Teedon Pit Extension, dated September 2020.

The revisions to the Site Plans included amendments with respect to tree planting, forest management, invasive species monitoring, and rehabilitation. This included:

- Revising the Operation Plan to change the word "should" to "shall" in the proposed note, i.e.: "The forest edge management zones shall be monitored for survival in the first, second and fifth years after planting. Replacement planting shall be undertaken if survival is less than 60% for each species."
- Revising the Operational Plan to add a note to the Forest Edge Management Schematic: "The proposed forest edge management measures within forest edge management zones 'A' AND 'B' will commence within three (3) years of the license issuance."
- Revising the Operational Plan to add a general note regarding invasive species monitoring and control: "Prior to and during extraction, the extraction area and immediately adjacent lands owned by CRH Canada Group Inc. will be periodically monitored for the presence of invasive plant species. Control measures will be implemented as required under the direction of a qualified ecologist. Control measures may include cutting woody stems and treating stumps with herbicide, spot application of herbicide to control newly established invasive species and/or use of tarps/covers to kill off invasive groundcover species."
- Revising Note #4 on the Rehabilitation Plan to say "... or another appropriate species recommended by a qualified ecologist at the time of planting."

- Revising Note #7 on the Rehabilitation Plan to include survival assessment at year five (5) in addition to years one (1) and two (2), and that the note will be modified to require 60% survival of each species.

In summary, the revisions in the Site Plans address all the Natural Heritage comments outlined in the Township's letter dated January 29, 2020.

If you have any questions, please contact me.

Sincerely,

Michelle Hudolin
Wetlands & Habitat Biologist



November 2, 2020

Via: Email

Timothy Leitch, P.Eng.
Director of Public Works
Township of Tiny
130 Balm Street West
Tiny ON L0L 2J0

Dear Mr. Leitch:

**Re: Teedon Pit Extension
CRH Canada Update Site Plans
Township of Tiny, County of Simcoe, Ontario
Project No.: 300031221.0000**

The Township of Tiny (Township) submitted a letter dated January 29, 2020 with updated comments to an application for a Category 3 License under the Aggregate Resources Act for the proposed expansion of the Teedon Pit located in North ½ of Lot 80, Concession 1.

CRH Canada Group Inc. (CRH), by letter dated September 14, 2020 provided an updated set of Aggregate Resources Act (ARA) Site Plans, which illustrated changes requested by the Township's January 29, 2020 comment letter.

Crozier Consulting Engineers provided a Comment Response Memo, dated October 2, 2020 to respond to the Township's January 29, 2020 traffic review comments.

R.J. Burnside & Associates Limited (Burnside) was retained by the Township to peer review the updated set of ARA Site Plans with respect to Hydrogeological, Traffic, Noise and Site Operation matters. It is our understanding that the Severn Sound Environmental Association will provide peer review comments relative to Natural Heritage matters.

Listed below are the Township's January 29, 2020 comments. The Burnside review comments are shown in italics.

Hydrogeological

Township Comments

CRH has committed to making the following amendments to the proposed Teedon Pit Extension Site Plans:

- Revising Note #42 on the Operational Plan to reflect the Township's request to have AWLRs loggers installed and for the wells to be monitored monthly.

- Revising Note #42 and the monitoring well schematic on the Operational Plan to include the additional note: "One year prior to extraction commencing, two additional monitoring wells shall be installed. One between MW9-18 and MW8-18 and the second shall be installed along the eastern edge of the extraction area."

Burnside Response

CRH has made the above noted amendments to Note 43 of the ARA Site Plans.

Traffic

Township Comment

- The CRH response notes that "No Stopping" signs will be installed on Darby Road, together with OPP enforcement, if required. In addition, CRH has confirmed that communication will be made to drivers/clients to prevent arrivals outside of the operating hours of the pit. We have assumed the OPP enforcement of "No Stopping" would be paid for by CRH. The Township requests that the TIS include the documented CRH policy and procedures to prevent the arrivals and parking of trucks prior to 5 am. This should be made available should a complaint come to the Township so a documented follow up be provided.

Crozier Comment

The requested CRH policy and procedures were attached to the Crozier Memo and include the following policies and procedures for the protection of the Township residents on Darby Road:

- No trucks are permitted to be parked and/or idled on Darby Road or any other nearby road prior to 7am, nor allowed to enter the site prior to 7 am.
- All trucks are to enter and exit Darby Road from its north end, with no trucks allowed to enter from the south end of this road.
- Warnings will be issued to truckers found to be in contravention of the above requirements. Suspension will be imposed from all Dufferin Aggregates locations for those truckers who are repeat offenders of these provisions.
- General health and safety policy specifies a maximum idling time of 5 minutes for trucks within the pit, when trucks are not being loaded upon arrival to the yard.

Burnside Response

These provisions will reduce the potential for complaints from residents. However, we suggest that the policy be expanded to agree to the following:

- *Responsibility of the applicant to provide ongoing periodic monitoring of on-site and off-site operations, and reporting to the Township, to confirm that the provisions of the policies and procedures are being followed;*
- *Responsibility of the applicant to address any future complaint issues, through acceptable mitigation measures;*
- *Quantify the number of infractions that are allowed, before suspension.*

We also note that the policies refer to a 7 am opening time for the pit. The TIS had noted that shipping is being proposed commencing at 5 am. If the existing pit does not currently allow for

shipping between 5 am and 7 am, then the impacts of such a time extension on area residents is not fully addressed by the policies and procedures outlined.

Township Comment

- The traffic counts that were used for the traffic operational analysis (i.e., Level of Service, Left Turn Lane Warrant analysis) do not capture the traffic from the Pit Extension. The peak hour counts on Darby Road do not show any heavy trucks during the peak hours analyzed. Considering that CRH has acknowledged that there have been 40 two-way truck trips during peak hours and that this will be the maximum in any given hour, a sensitivity analysis should be provided in the TIS to consider this maximum. This may impact the external road improvements required on both Darby Road and Highway 93. The TIS proposes widenings along Darby Road and a recovery taper along Highway 93 to facilitate turning movements at the intersection of Darby Road / Highway 93. The Township requests that:
 - a sensitivity analysis be provided in the TIS to consider this maximum. This may impact the external road improvements required on both Darby Road and Highway 93;

Crozier Comment

The Memo suggests that the maximum truck volumes, acknowledged by CRH, occur at a very low frequency, and therefore should not be used for analyzing traffic impacts.

The Memo notes that the TIS did increase the northbound left turn volumes, to be conservative, and that a left turn lane was not warranted. Highway 93 is within MTO's jurisdiction, including approvals of the required improvements to the Highway.

Burnside Response

In our experience, the assessment of traffic impacts is typically based on the 30th highest volume. Since the TIS did not provide an assessment of the frequency of the maximum volumes, our recommendation has not been fully addressed.

We recommend that the sensitivity analysis as originally recommended of the impacts of these maximum volumes be completed, unless comments can be provided by the MTO that this is not required.

Township Comment

The Township requests that:

- comments / approvals be provided from the Ministry of Transportation (MTO) for the TIS and proposed highway improvements;

Crozier Comment

The Memo noted that the MTO has provided planning approval of the TIS and the proposed improvements to Highway 93, subject to the necessary Encroachment Permit being issued by the MTO.

Burnside Response

Burnside recommends that CRH is to notify the Township and Burnside when the Encroachment Permit has been issued by the MTO.

Township Comment

The Township requests that:

- CRH enter into a Road Improvement Agreement for Darby Road with the Townships of Tiny and Tay, which would include, but not be limited to, detail engineering design drawings and securities.

Crozier Comment

The Memo notes that CRH is prepared to enter into the necessary Road Improvement Agreement with the Townships, including posting applicable securities.

Burnside Response

Burnside recommends that the detailed engineering design drawings and security estimates be provided to both Townships and Burnside for review.

Township Comment

- The TIS concludes that left turn lane warrants are not met on Highway 93, based on the low percentages of left turn movements at the intersection of Darby Road / Highway 93. The analysis should be based on equivalent cars (i.e., factor of 2 for large trucks), together with a more realistic estimate of peak period turns that may be generated from the pit. Left turn lane warrants may be met under such conditions. The Township requests that the TIS include an analysis based on equivalent cars (i.e., factor of 2 for large trucks).

Crozier Comment

The Memo notes that MTO guidelines do not specifically require truck percentages to be adjusted and that left turning trucks will be empty, and therefore subject to normal acceleration rates.

Burnside Response

In our experience it is good practice to apply a truck adjustment factor for establishing warrants where truck turning may be a consideration. Transportation Association of Canada (TAC) guidelines (Geometric Design Guide for Canadian Roads, June 2017), specifies longer gap requirements for truck turning maneuvers as compared to cars.

We recommend that the analysis be adjusted based on equivalent cars (i.e., factor of two for large trucks), unless comments can be provided by the MTO that this is not required.

Noise

Township Comments

CRH has committed to making the following amendments to the proposed Teedon Pit Extension Site Plans:

- To include the equipment list and its associated maximum sound power under the section titled "Equipment to be used Onsite and Noise/Air Mitigation". In addition, this equipment list and sound power readings are identified in Section 2.0 of the Acoustical Assessment Report.

In addition, CRH noted that they had submitted a minor site plan amendment to the MNRF to permit the construction of the acoustic berms and restrict the location of the genset trailer on-site so that this can be completed immediately. Confirmation from MNRF in this regard is requested by the Township to confirm that this has been completed.

Burnside Response

CRH has added an Equipment List Table with Note 26 of the ARA Site Plan, which lists the equipment / maximum sound power to be used for pit operations.

CRH has provided an amended Operational Plan (approved by the MNRF) prepared by Skelton, Brumwell & Associates Inc., which showed that the MNRF had approved changes on June 13, 2019 for the construction of acoustic berms and restricted location of the genset trailer on-site.

Site Operations

Township Comments

CRH has committed to making the following amendments to the proposed Teedon Pit Extension Site Plans:

- Revising the proposed Site Plans to prohibit the storage of asphalt in the extension.
- Revising the Operational Plan add a new note to the rehabilitation page to state that "no fill shall be imported and disposed of at the site other than to establish slopes as specified in the Rehabilitation Plan."

Burnside Response

CRH has added Note 50 in the ARA Site Plan, which prohibits the storage of asphalt on the site.

*Note 51 has been amended to say "Clean Inert Fill may **only** be imported..."*

CRH has added Note 53 in the ARA Site Plan, which prohibits the disposal of imported fill other than to establish slopes as specified in the Rehabilitation Plan.

We trust that you will find the above to be in order. Should you have any questions, please contact the undersigned.

Yours truly,

R.J. Burnside & Associates Limited



Cecil Gratrix, C.E.T., rcca
Senior Project Manager
CG:sc



Henry Centen, P.Eng.
Senior Transportation Engineer

Other than by the addressee, copying or distribution of this document, in whole or in part, is not permitted without the express written consent of R.J. Burnside & Associates Limited.

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130 Balm Beach Road West
Tiny, Ontario L0L 2J0
(705) 526-4204 | 1-866-939-8469
www.tiny.ca

December 22, 2020

Ministry of Natural Resources and Forestry
2284 Nursery Road
Midhurst, ON L9X 1N8
Attention: Robert Herbst (robert.herbst@ontario.ca)

CRH Canada Group Inc.
2300 Steeles Avenue West, 4th Floor
Concord, ON L4K 5X6
Attention: Jessica Ferri (Jessica.ferri@ca.crh.com)

**RE: Aggregate Resource Act Application – Teedon Pit Extension
Township of Tiny Updated Comments
North Part of Lot 80, Concession 1 O.S. (Roll #1-029-00)**

Thank you for the opportunity to provide updated comments on the proposed Teedon Pit Extension Application under the Aggregate Resources Act (ARA).

The Township submitted an objection letter dated March 25, 2019, on the ARA application. The letter focused on comments in the following areas: hydrogeological, traffic, noise, site operation, and natural heritage. The Township submitted a subsequent letter dated January 29, 2020.

The Township has been reviewing and commenting on all new submission material from the applicant in their effort to address the Township's objection comments. The Township has retained R. J. Burnside & Associates Limited (Burnside), Aercoustics Engineering Limited (Aercoustics), and the Severn Sound Environmental Association (SSEA) to peer review all technical material in support of the application.

Confidential Planning & Development Report PD-042-20 regarding the Teedon Pit Extension Application was presented to Council at the Committee of the Whole meeting held on November 30, 2020. This Report provides the background relative to the Township's review of the application and the current status of comments. As a result of this Report, Council Recommendation #000/20 was approved at the December 21, 2020 Council Meeting and reads:

"WHEREAS the Committee of the Whole considered Confidential Planning & Development Report PD-042-20 regarding the Teedon Pit Extension Application by CRH Canada Group Inc.;

NOW THEREFORE BE IT RESOLVED THAT staff be directed to provide comments to the Ministry of Natural Resources and Forestry and CRH Canada Group Inc. as outlined in PD-042-20."

Council Recommendation #000/20 and Confidential Planning & Development Report PD-042-20 are attached to this letter for your information.

Although the majority of the Township's comments have been addressed, the Township is not satisfied that all traffic matters related to this proposal have been satisfactorily dealt with for the reasons stated in this letter.

TRAFFIC COMMENTS

Burnside has completed a peer review of the Traffic Impact Study (TIS) prepared by C.F. Crozier & Associates Inc. (Crozier), dated October 4, 2019 and the Comment Response Memo, dated October 2, 2020, prepared Crozier.

The Township's concerns regarding traffic have not been addressed as follows:

- The Township requests that the CRH policies and procedures be expanded to add the following items:
 - a) commit to ongoing periodic monitoring of on-site and off-site operations, and reporting to the Township, to confirm that the provisions of the policies and procedures are being followed;
 - b) commit to address any future complaint issues, through acceptable mitigation measures; and
 - c) Quantify the number of infractions that are allowed, before driver suspension.

The policies refer to a 7 am opening time for the pit. The TIS had noted that shipping is being proposed commencing at 5 am. If the existing pit does not currently allow for shipping between 5 am and 7 am, then the impacts of such a time extension on area residents is not fully addressed by the policies and procedures outlined.

- The traffic counts that were used for the traffic operational analysis (i.e., Level of Service, Left Turn Lane Warrant analysis) do not capture the traffic from the Pit Extension. The peak hour counts on Darby Road do not show any heavy trucks during the peak hours analyzed. Considering that CRH has acknowledged that there have been 40 two-way truck trips during peak hours and that this will be the maximum in any given hour, the Township requested in the January 29, 2020 letter that a sensitivity analysis be provided in the TIS to consider this maximum. This may impact the external road improvements required on both Darby Road and Highway 93. The TIS proposes road widenings along Darby Road and a recovery taper along Highway 93 to facilitate turning movements at the intersection of Darby Road and Highway 93. The additional information provided by Crozier in their Memo dated October 2, 2020 does not satisfactorily address this concern. The Township maintains that a sensitivity analysis of these maximum volumes be completed, unless comments are provided by the MTO that this is not required.
- The TIS concludes that left turn lane warrants are not met on Highway 93, based on the low percentages of left turn movements at the intersection of Darby Road and Highway 93. The analysis should be based on equivalent cars (i.e., factor of 2 for large trucks), together with a more realistic estimate of peak period turns that may be generated from the pit. Left turn lane warrants may be met under such conditions. The Township requested in the January 29, 2020 letter that the TIS include an analysis based on equivalent cars (i.e., factor of 2 for large trucks). In Burnside's experience, it is good practice to apply a truck adjustment factor for establishing warrants where truck turning may be a consideration. Transportation Association of Canada (TAC) guidelines (Geometric Design Guide for Canadian Roads, June 2017), specifies longer gap requirements for truck turning maneuvers as compared to cars. The additional information

provided by Crozier in their Memo dated October 2, 2020 does not satisfactorily address this concern. The Township maintains that the analysis be adjusted based on equivalent cars (i.e., factor of two for large trucks), unless comments can be provided by the MTO that this is not required.

- The Township requests that CRH notify the Township and Burnside when the Encroachment Permit has been issued by the MTO.
- The Township requests that CRH enter into a Road Improvement Agreement for Darby Road with the Townships of Tiny and Tay, which would include, but not be limited to, detailed engineering design drawings and securities.

Sincerely,

THE CORPORATION OF THE TOWNSHIP OF TINY

Two handwritten signatures in dark ink. The signature on the left is for Shawn Persaud and the one on the right is for Tim Leitch.

Shawn Persaud, BA, MCIP, RPP,
Director of Planning & Development

Tim Leitch, P. Eng.
Director of Public Works

CC: Members of Council for the Township of Tiny
Sue Walton, Director of Legislative Services/Clerk for the Township of Tiny (swalton@tiny.ca)
David Parks, Director of Planning, Economic Development and Transit (David.Parks@simcoe.ca)
Cecil Gratrix, R. J. Burnside & Associates (Cecil.Gratrix@rjburnside.com)
Julie Cayley, Severn Sound Environmental Association (JCayley@severnsound.ca)
Hon. Bruce Stanton, MP, North Simcoe (bruce.stanton@parl.gc.ca)
Hon. Jill Dunlop, MPP, Simcoe North (jill.dunlopco@pc.ola.org)