

LEGEND

- EXISTING POST & WIRE FENCE LINE
- - - 120m BOUNDARY LIMIT
- BOUNDARY OF AREA TO BE LICENCED
- - - LIMIT OF EXTRACTION
- - - 300m PROCESSING SETBACK
- ⊕ TH/BH TESTHOLE OR BOREHOLE LOCATION
- ⊕ MW MONITORING WELL LOCATION
- ⊕ EXISTING SPOT ELEVATION
- LIMIT OF TREE COVER
- CURRENT ZONING
- CURRENT LAND USE
- DIRECTION OF EXISTING SURFACE WATER FLOW
- ⊕ PRIVATE SUPPLY WELL (APPROXIMATE LOCATION)

AI, RUI
AGRICULTURAL, RURAL



- NOTES**
- This site plan is prepared under the Aggregate Resources Act for a Class A licence, Category 1.
 - Topographical information based on field investigation by Gamsby & Mannerow Limited and Ontario Base Mapping.
 - Area to be licenced: 39.6 ha±
 - The "high" groundwater elevation descends from 400.0 metres in the westerly portion of the site to 398.0 metres in the easterly portion of the site, as recorded May, 2013.

NOTES :

APPLICANT:
PEARL & BRIAN BUMSTEAD
584015 - 60 SIDEROAD
RR 2 HOLLAND CENTRE, ONTARIO
NOH 1R0

 APPLICANT'S SIGNATURE

 APPLICANT'S SIGNATURE

 DATE

THE POSITION OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED.

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NO.	DATE	REVISION DESCRIPTION	CHK'D
3	MAY 27/14	REVISED EXCAVATION LIMIT ELEVATIONS	M.D.N.
2	MAR 27/14	ADDITION OF NOISE ATTENUATION BERMS	M.D.N.
1	NOV 8/13	PER MNR COMMENTS DATED OCT 23/13	M.D.N.



BUMSTEAD PIT
PART LOT 27, CONCESSION 7
FORMER TOWNSHIP OF HOLLAND
TOWNSHIP OF CHATSWORTH
COUNTY OF GREY

EXISTING FEATURES PLAN



DRAWN BY :	APPROVED BY :	PROJECT NO. :	DRAWING NO. :
E.J.T.	M.D.N.	210099	1/4
DESIGNED BY :	DATE :	SCALE :	
M.D.N.	SEP 9/13	1:2,000	

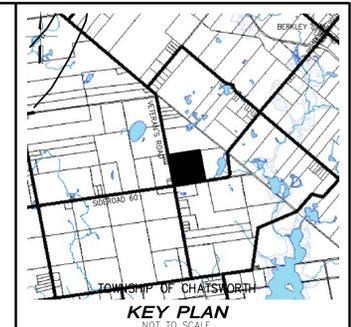
LEGEND

- EXISTING FENCE LINE
- - - 120m BOUNDARY LIMIT
- BOUNDARY OF AREA TO BE LICENCED
- - - LIMIT OF EXTRACTION
- - - 300m PROCESSING SETBACK
- - - BOTTOM OF SLOPE
- ⊕ TH/BH TESTHOLE OR BOREHOLE LOCATION
- MW MONITORING WELL LOCATION
- ⊕ EXISTING SPOT ELEVATION
- ⊕ PROPOSED EXCAVATION LIMIT ELEVATION
- ⊕ LIMIT OF TREE COVER
- ⊕ CURRENT ZONING
- ⊕ CURRENT LAND USE
- ⊕ PRIVATE SUPPLY WELL (APPROXIMATE LOCATION)

A1, RUI
AGRICULTURAL, RURAL

NOTES

1. This site plan is prepared under the Aggregate Resources Act for a Class A licence, Category 1.
2. Topographical information based on field investigation by Gamsby & Mannerow Limited and Ontario Base Mapping.
3. Area to be licenced: 39.6 ha±
4. Area to be extracted: 18.92 ha
5. The "high" groundwater elevation descends from 400.0 metres in the westerly portion of the site to 398.0 metres in the easterly portion of the site, as recorded May, 2013.
6. No water diversion or extraction below the water table is proposed. The maximum depth of extraction will occur within 1.5m of the water table. The maximum depth of extraction is to be from 400.0 to 398.0 metres ASL, with requirements and limitations per notes 18 and 22.
7. Surface water drainage will be by percolation or evaporation.
8. Equipment to be used on-site for daily operations may include; hydraulic excavators, dozers, loaders, skid steers, grader, crusher, screener, saws, generators, air compressors, pumps and trucks.
9. Fuel storage tanks shall be installed and monitored in accordance with the Liquid Fuels Handling Code under the *Technical Standards & Safety Act*. Fuel storage tanks shall not be located on bottom of pit floor.
10. Internal haul road shall be located on pit floor as required, as operations progress.
11. No additional tree screening is proposed.
12. Wire fence complete with signage shall be erected around the perimeter of the licenced area/limit of extraction prior to extraction.
13. Pit operations shall be limited to the hours of 7:00 am to 7:00 pm, Monday to Friday and 9:00 am to 2:00 pm, Saturday with no Sunday operations.
14. Any wood of value taken during clearing operations shall be used as fire wood. Other wood and stumps shall be chipped and used in the rehabilitation of the site or disposed of off-site in accordance with applicable MOE guidelines.
15. Topsoil and Overburden:
 - Topsoil must be stripped sequentially prior to pit extraction.
 - All trees within 5 metres of the limits of extraction must be removed.
 - All topsoil or overburden stripped during operations shall be stockpiled separately on-site with stable vegetated side slopes.
16. Stockpile Handling:
 - The topsoil and overburden from Phase 1 will be used to create berms as shown along Sideroad 60 and Veterans Road. Any excess topsoil shall be placed in stockpiles away from the limits of extraction.
 - Phase 1 extraction shall proceed from the east limit of extraction to the west. As Phase 1 nears completion, stripping of topsoil and overburden in Phase 2 may commence.
 - Topsoil and overburden stripped from Phase 2 shall be used for rehabilitation of Phase 1, with any excess topsoil to be placed in stockpiles.
 - As Phase 2 nears completion, stripping of topsoil and overburden in Phase 3 may commence.
 - Topsoil and overburden stripped from Phase 3 shall be used for the rehabilitation of Phases 1 & 2, with any excess topsoil to be placed in stockpiles.
 - Rehabilitation of Phase 3 to be completed using topsoil from excess stockpiles and from berms along Sideroad 60 and Veterans Road (i.e. topsoil from Phase 1).
17. The maximum tonnage to be extracted in any year is 150,000 tonnes.
18. Any standing water shall be noted and recorded on a weekly basis during pit operations. These inspection reports are to be compiled and provided with the Annual Compliance Assessment Report for submission to the MNR and Clerk of the upper and lower tier municipalities.
19. Prior to extraction within each phase, the limit of extraction is to be clearly staked/demarcated. Setbacks are to be clearly staked and visible at all times.
20. Dust is to be mitigated on-site.
21. The construction of one (1) storage/operations building is proposed in the location shown.
22. A spills contingency program shall be developed prior to site preparation.
23. Hydrogeological Study Notes:
 - Refueling and maintenance of machinery (if any) shall not be conducted in areas of the excavation which are within 1.5 metres of the water table, i.e. where excavations are completed to the water table.
 - Excavation and/or the operation of vehicles shall not be conducted in areas of standing or ponded water.
 - Excavation shall not proceed past depth where water enters the excavation. Once water enters an excavated area, the water level elevation shall be noted and adjacent excavations stopped approximately 0.3 metres above the water level elevation.
 - No chemical spraying (pesticide/herbicide) shall be conducted within areas of excavation.
 - An access/egress road/route shall be maintained a minimum of 1 metre above the maximum proposed depth in the excavation areas to prevent vehicle operation in standing water.
 - Areas shall maintain vegetative cover as long as possible prior to excavation.
 - No dewatering or redirection of surface water under the limit of excavation shall be conducted to augment aggregate extraction.
 - During operations, areas of standing water shall be noted and recorded on a weekly basis. Where areas of standing water are noted to remain for a period greater than 1 month during operations and are associated with the groundwater elevation (as opposed to surface ponding), remediation by filling with suitable material shall be conducted.
 - Yearly water level monitoring at monitoring wells MW-1, MW-2 and MW-3 shall be conducted in the spring by a qualified professional. Water levels will be compared to the proposed bottom contours, which will be adjusted to the maximum expected water table, as necessary. Staff shall be trained by a qualified professional on how to implement the preventative measures under this note.
24. No processing equipment shall be operated within 300 metres of a sensitive receptor.
25. Environmental Compliance approvals shall be obtained for processing equipment prior to assembly and/or operation, as required.
26. Extraction is to be completed in one lift. Face heights are to meet Ministry of Labour regulations.
27. NETR Mitigation Measures:
 - The only additional limit of extraction setbacks recommended for this pit operation beyond that of standard setbacks for the ARA include 20 metre setbacks from polygon 6. This setback is to be measured from the drip line of the trees. For the purposes of the NETR the MNR operational setback requirements are considered sufficient for all other setbacks.
 - No water diversion is anticipated and any perched water intersected during excavation will be controlled by localized ditching and discharge to lower elevations where it will be infiltrated into the subsurface.
 - No surface waters are to be discharged from the proposed pit site. Precipitation shall be allowed to naturally percolate into the native soil substrate.
 - Topsoil and subsoil will be stripped and placed separately wherever there are distinguishable layers and sufficient thickness to allow separate handling. Topsoil and overburden will remain on site.
 - Overburden and topsoil not required for immediate use in progressive rehabilitation of this site may be temporarily at grade or on the active pit floor. Any stockpile to be stored for longer than one (1) year will be vegetated to control erosion.
 - No scrap will be stored on site.
 - All equipment storage will be contained within the licenced pit area.
28. Archaeological Assessment Notes:
 - Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the Ontario Heritage Act. The proponent of person discovering the archaeological resources must cease alteration of the site immediately and engage a licenced consultant archaeologist to carry out archaeological fieldwork in compliance with Section 48(1) of the Ontario Heritage Act.
 - The Cemeteries Act, R.S.O. 1990 c.4 and the Funeral, Burial and Cremation Services Act, 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries and the Ministry of Consumer Services.



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N0H 1R0

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BUMSTEAD PIT

PART LOT 27, CONCESSION 7

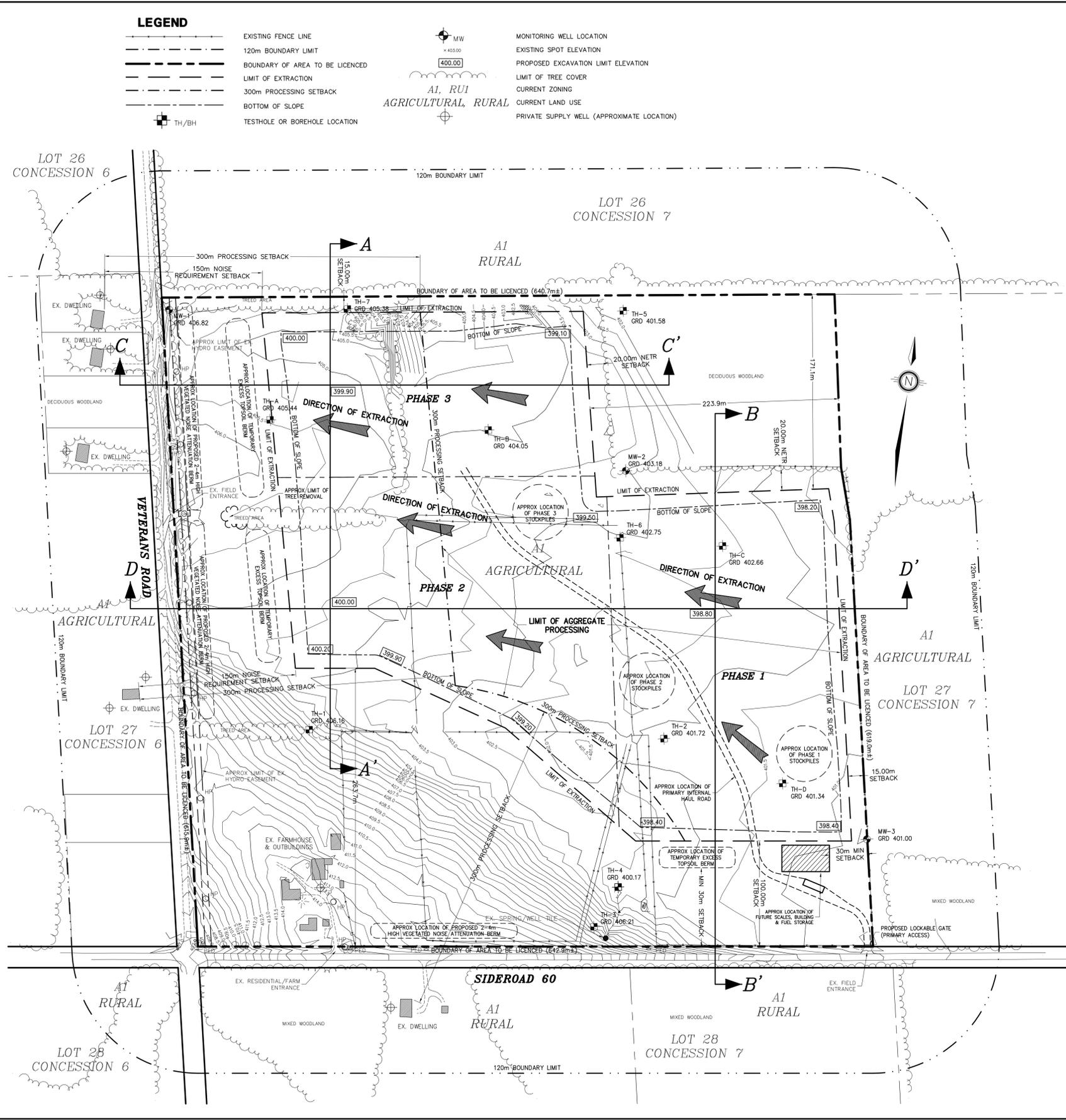
FORMER TOWNSHIP OF HOLLAND

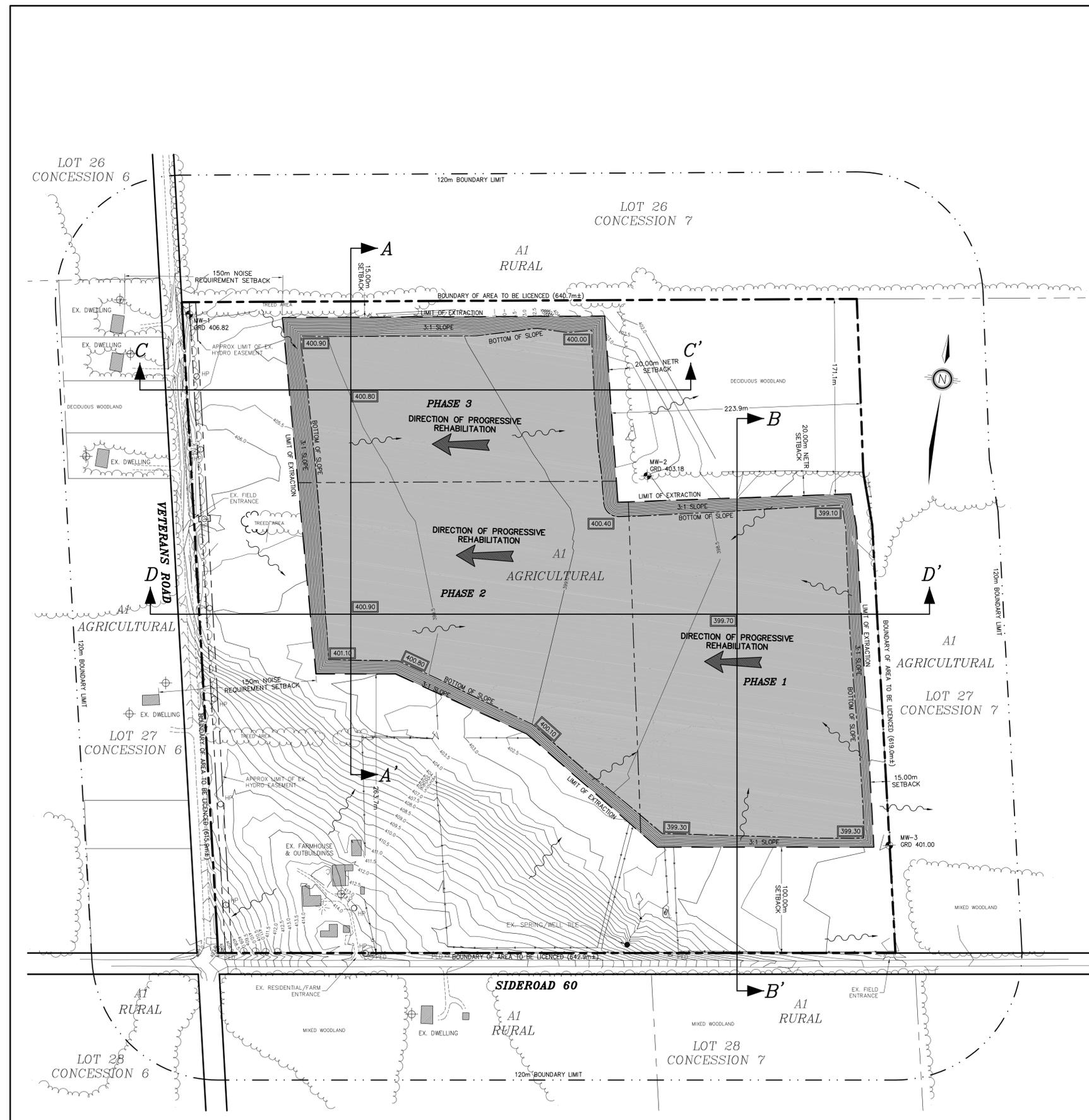
TOWNSHIP OF CHATSWORTH

COUNTY OF GREY

DRAWN BY: E.J.T.	APPROVED BY: M.D.N.	PROJECT NO. : 210099	DRAWING NO. : 2/4
DESIGNED BY: M.D.N.	DATE : SEP 9/13	SCALE : 1:2,000	

OPERATIONAL PLAN





LEGEND

- EXISTING FENCE LINE
- 120m BOUNDARY LIMIT
- BOUNDARY OF AREA TO BE LICENCED
- LIMIT OF EXTRACTION
- BOTTOM OF SLOPE
- TH/BH
- MW
- 210.40
- 400.00
- LIMIT OF TREE COVER
- A1, RUI
- AGRICULTURAL, RURAL
- DIRECTION OF EXISTING SURFACE WATER FLOW
- PRIVATE SUPPLY WELL (APPROXIMATE LOCATION)



NOTES

1. Progressive rehabilitation shall commence as soon as extraction reaches the west limit of Phase 1. Rehabilitation operations shall proceed from east to west. Slope rehabilitation in Phase 2 shall follow the extraction operations. However, an area near the west limit of Phase 1 may be used for processing and stockpiling of material. Rehabilitation in that area shall be completed when the pit has been depleted.
2. All topsoil and overburden stripped during on-site operations shall be placed in stockpiles on-site and used in the rehabilitation on the site.
3. Mined aggregate materials not suitable for sale or imported fill shall be used to grade slopes in the rehabilitation of the site.
4. Clean inert fill may be imported to facilitate the establishment of 3:1 (hor:ver) slopes on the pit faces. The licensee must ensure that the material is tested at the source, before it is deposited on-site, to ensure that the material meets the MOE criteria under Table 1 of the MOE's Soils, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act. Sampling results will be provided to the MNR upon request.
5. Notwithstanding Note 4, where the imported material is not being placed within 1.5 metres of the surface, the criteria under Table 1 for sodium absorption ratio and electrical conductivity do not have to be met.
6. Topsoil and overburden shall be spread over the pit floor to a depth of 0.9 metres and completed slopes within the extraction limits, graded and tilled to alleviate compaction.
7. All preexisting buildings within the licenced area are to remain. All buildings and scales associated with pit operations shall be removed.
8. Internal haul roads shall be removed.
9. Surface water drainage will be by percolation or evaporation.
10. The ambient groundwater table elevation is not anticipated to be altered due to operations. The "high" groundwater elevation descends from 400.0 metres in the westerly portion of the site to 398.0 metres in the easterly portion of the site, as recorded May, 2013.
11. The site shall be restored Agricultural land use with capability to grow crops including soybean, canola, wheat, corn and alfalfa.

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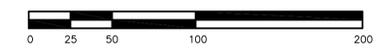
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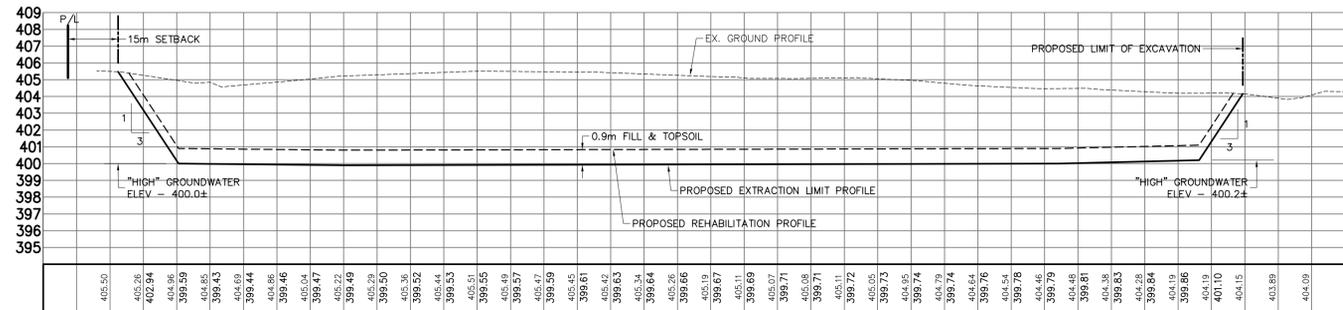


BUMSTEAD PIT
PART LOT 27, CONCESSION 7
FORMER TOWNSHIP OF HOLLAND
TOWNSHIP OF CHATSWORTH
COUNTY OF GREY

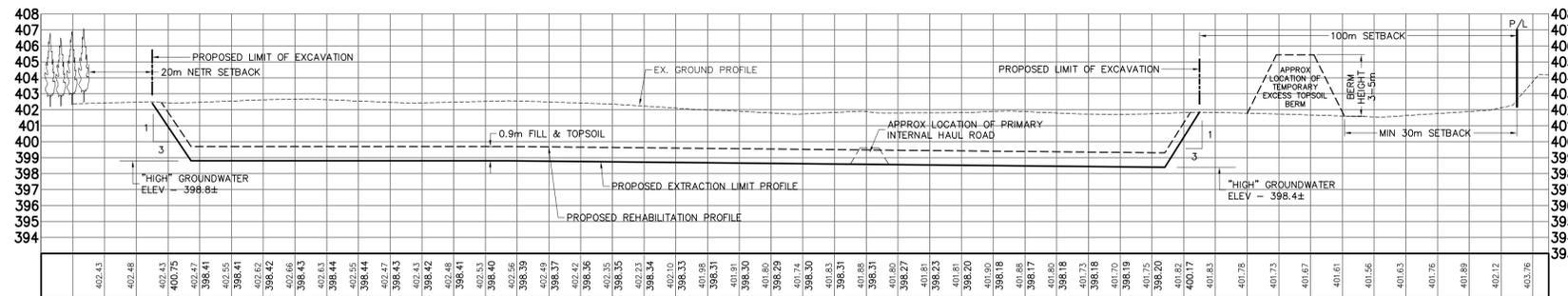
DRAWN BY :	APPROVED BY :	PROJECT NO. :	DRAWING NO. :
E.J.T.	M.D.N.	210099	3/4
DESIGNED BY :	DATE :	SCALE :	
M.D.N.	SEP 9/13	1:1,500	

REHABILITATION PLAN

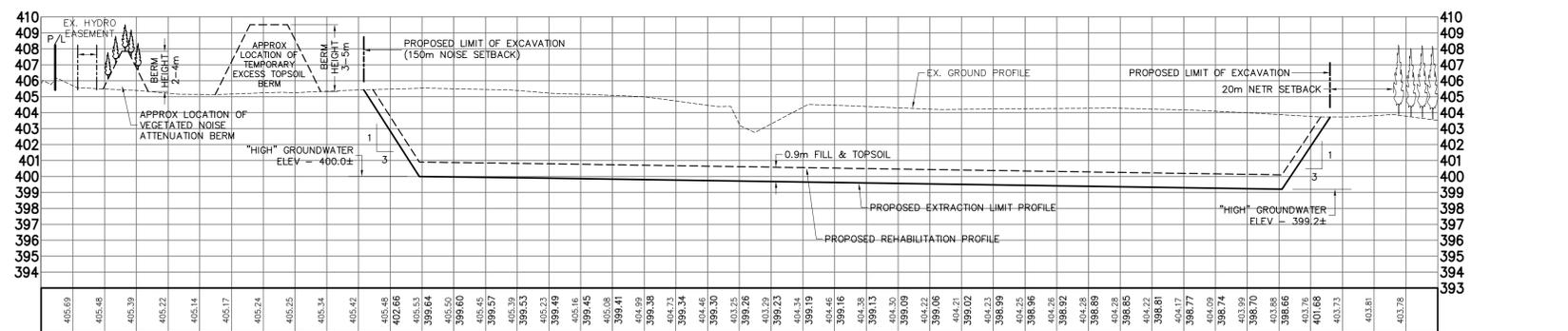




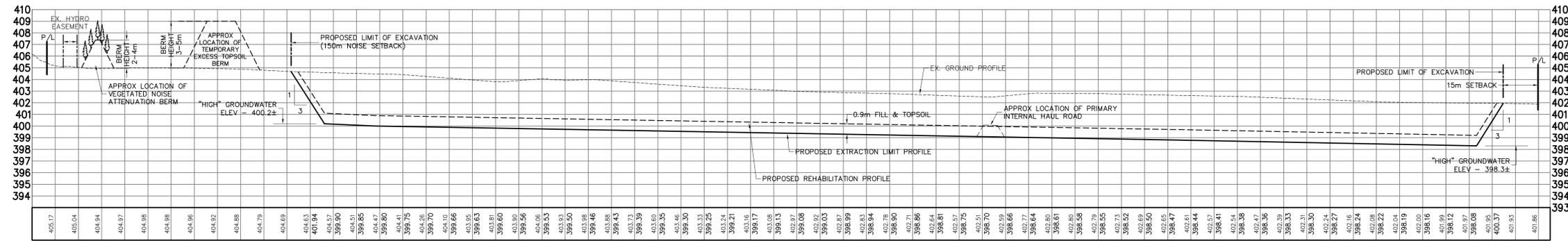
SECTION A-A'



SECTION B-B'



SECTION C-C'



SECTION D-D'

NOTES 1. Maximum finished side slope gradient shall be 3:1.

LEGEND
 401.82 EXISTING GROUND ELEVATION
 400.16 PROPOSED EXCAVATION LIMIT ELEVATION



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TOWNSHIP OF CHATSWORTH
COUNTY OF GREY

DRAWN BY : E.J.T. APPROVED BY : M.D.N. PROJECT NO. : 210099 DRAWING NO. : 4/4
 DESIGNED BY : M.D.N. DATE : SEP 9/13 SCALE : 1:1,500

