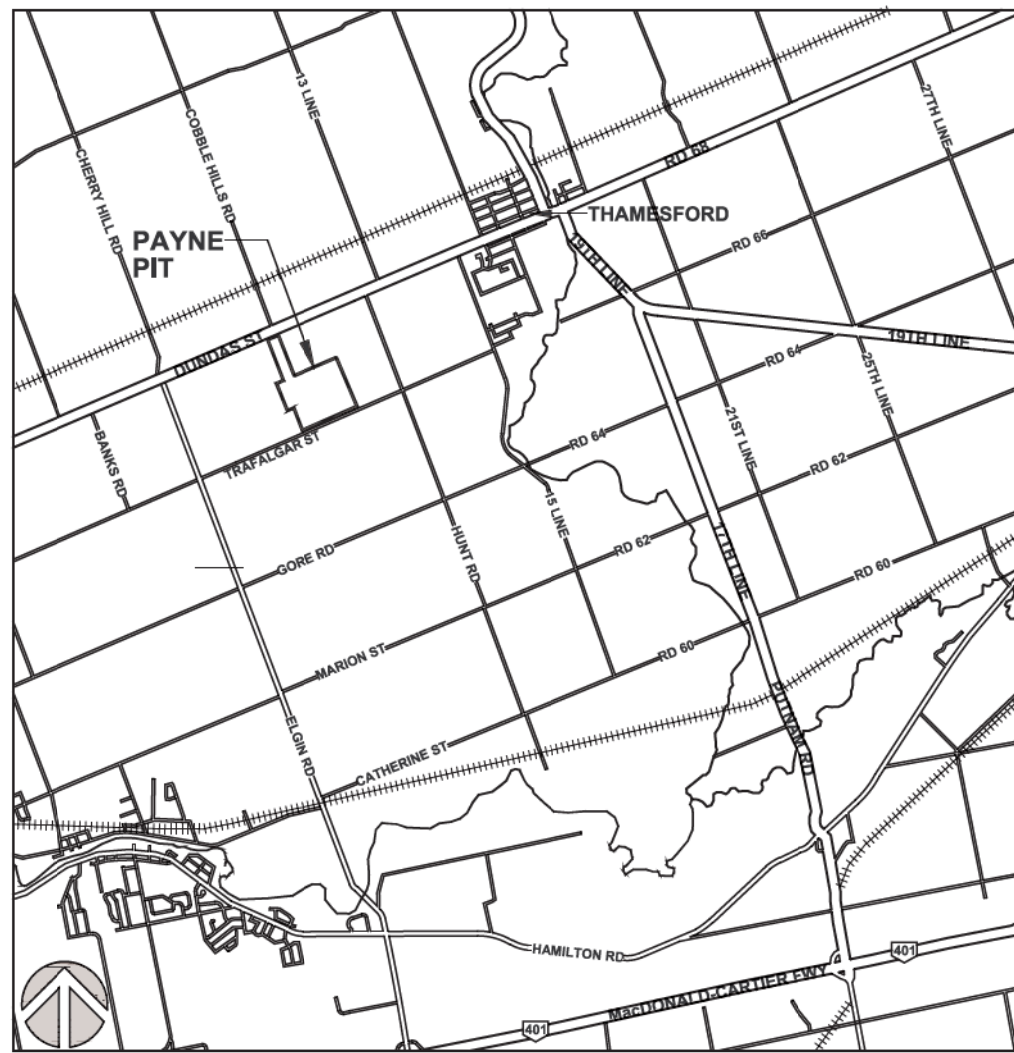


EXISTING FEATURES NOTES

- GENERAL SITE PLAN INFORMATION
1. THIS SITE PLAN CONSIST OF 5 DRAWINGS AND MUST BE READ COLLECTIVELY.
 2. ALL MEASUREMENTS SHOWN ON THIS SITE PLAN ARE IN METRES.
- LICENCE INFORMATION
3. THIS SITE PLAN IS PREPARED FOR SUBMISSION TO THE MINISTRY OF NATURAL RESOURCES AND FORESTRY UNDER THE AGGREGATE RESOURCES ACT FOR A CATEGORY 1 CLASS 'A' LICENCE, PIT BELOW THE WATER TABLE.
4. APPLICANT:
- AAROC AGGREGATES LTD.
3002 PAGE STREET LONDON,
ONTARIO N6V 4J1
5. TOTAL AREA TO BE LICENCED: 66.9 ha
TOTAL AREA TO BE EXTRACTED: 58.4 ha
TOTAL AREA TO BE REHABILITATED: 58.4 ha
- BASE INFORMATION
6. TOPOGRAPHIC INFORMATION FOR LOT 16 & 17, CONCESSION 1 NTR WAS OBTAINED FROM FIRST BASE SOLUTIONS, NOVEMBER 8, 2018 AND MAY 15, 2020. ALL ELEVATIONS ARE GEODETIC AND ABOVE SEA LEVEL (ASL).
7. ZONING INFORMATION OBTAINED FROM SCHEDULE A, TOWNSHIP OF THAMES CENTRE, ZONING BY-LAW NO. 7-2005, KEY MAP NO. 33, DATED SEPTEMBER 2012. MAJORITY OF PROPOSED LICENCE IS PRESENTLY ZONED A (AGRICULTURE), WITH EP (ENVIRONMENTAL PROTECTION) IN NORTHEAST.
- HYDROGEOLOGICAL INFORMATION
8. HYDROGEOLOGICAL INFORMATION INCLUDING GROUNDWATER ELEVATION WAS OBTAINED FROM REPORT BY GROUNDWATER SCIENCE CORP., DATED FEBRUARY 2021.
9. THE WATER TABLE ELEVATION WITHIN THESE PROPERTIES IS ESTIMATED TO BE BETWEEN ± 30.0m TO 20m ABOVE SEA LEVEL (ASL), BASED ON ABOVE REPORT.
- TECHNICAL REPORTS
10. HYDROGEOLOGICAL INFORMATION WAS OBTAINED FROM REPORT BY GROUNDWATER SCIENCE CORP., DATED FEBRUARY 2021 (REFER TO SHEET 3 OF 5 FOR TECHNICAL RECOMMENDATIONS).
11. NATURAL ENVIRONMENT INFORMATION WAS OBTAINED FROM REPORT BY MTE DATED JANUARY 28, 2021 (REFER TO SHEET 3 OF 5 FOR TECHNICAL RECOMMENDATIONS).
12. ARCHAEOLOGICAL INFORMATION WAS OBTAINED FROM REPORT BY TIMMINS MARTELLE HERITAGE CONSULTANTS INC. DATED DECEMBER 2020 (REFER TO SHEET 3 OF 5 FOR TECHNICAL RECOMMENDATIONS).
13. ACOUSTICAL INFORMATION WAS OBTAINED FROM NOISE REPORT BY HGC ENGINEERING DATED FEBRUARY 2021 (REFER TO SHEET 3 OF 5 FOR TECHNICAL RECOMMENDATIONS).

KEY MAP



LEGEND

- BOUNDARY OF AREA TO BE LICENCED
- 120m INFORMATION BOUNDARY
- EXISTING LICENCED AREA
- LOT LINE
- PROPERTY LINE
- REGULATORY SETBACK LINE
- WATERCOURSE

- EXISTING FENCE
- EXISTING 5m CONTOUR LINE
- EXISTING 1m CONTOUR LINE
- EXISTING SPOT ELEVATION
- EXISTING VEGETATION
- LOCATION OF CROSS SECTION
- EXISTING ENTRANCE/EXIT
- EXISTING BERM
- EXISTING BUILDING AND NUMBER
- EXISTING HYDRO POLE
- DIRECTION OF SURFACE WATER DRAINAGE
- TEST PIT LOCATION AND IDENTIFICATION (DUG BY APPLICANT ON MAY 1, 2018)
- TEST PIT LOCATION AND IDENTIFICATION (DUG BY APPLICANT, SUPERVISED BY ENCLOSE, ON DECEMBER 17, 2018)
- TEST PIT LOCATION AND IDENTIFICATION (DUG BY ENCLOSE ON MAY 19, 2020)
- EXISTING BOREHOLE MONITORING WELL
- EXISTING BOREHOLE MONITORING WELL
- MONITORING WELL INSTALLED BY ENCLOSE DECEMBER 6 & 7, 2018
- BOREHOLE MONITORING WELL INSTALLED BY ENCLOSE MAY 19, 2020

BUILDING LIST

No.	Description
1.	BARN
2.	HOUSE
3.	HOUSE
4.	SHED
5.	SHED
6.	HOUSE
7.	HOUSE
8.	METAL SHED
9.	BARN
10.	BARN
11.	GARAGE
12.	DRIVE SHED
13.	HOUSE
14.	SHED
15.	PUMP HOUSE
16.	TOOL SHED
17.	HOUSE
18.	SHED
19.	SHED
20.	HOUSE
21.	BARN
22.	HOUSE
23.	SHED
24.	HOUSE
25.	HOUSE
26.	GARAGE
27.	HOUSE
28.	SHED
29.	SHED
30.	BARN

No.	DATE	REVISION	BY	CHKD	APPD
1	2021	1	1	1	1

Pre Licence Review

Site Plan Amendments

Harrington
M. Avon Ltd.

41 Main Street, Unit 102
Unionville, Ontario L3R 2E5
Tel: 905-294-4232 Fax: 905-294-1023
www.harringtonmavon.com

Project Name

AAROC AGGREGATES

PAYNE PIT

LICENCE No. _____

APPLICANT'S SIGNATURE _____

PART LOTS 16 AND 17 CONCESSION 1 NTR
MUNICIPALITY OF THAMES CENTRE
(FORMERLY NORTH DORCHESTER), COUNTY OF MIDDLESEX

Scale 1:2000

North

Stamp

Drawing Status
SUBMITTED TO MNRF
FOR APPROVAL

Drawn SB

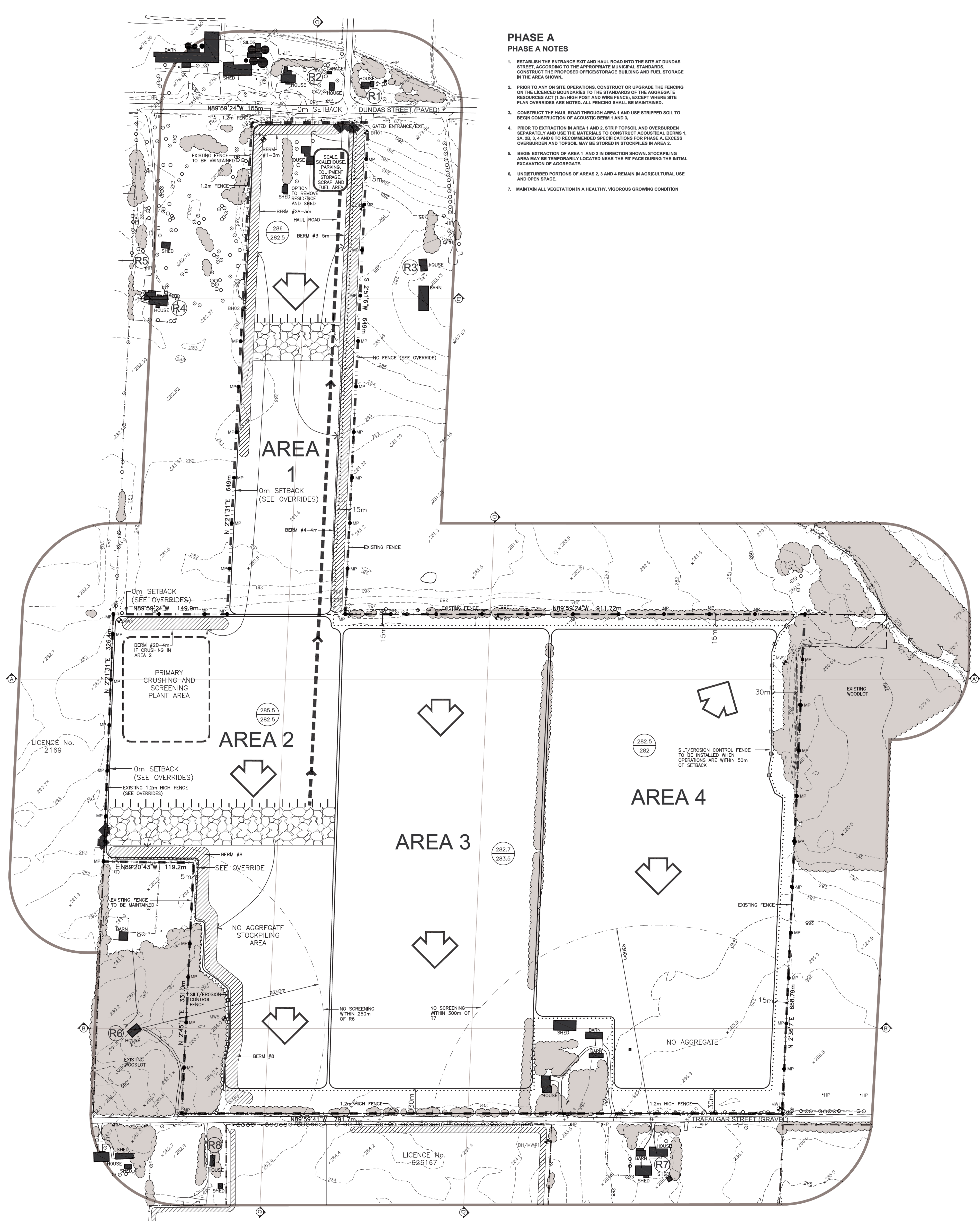
Checked BJ

Issue Date MAR 2021

Project Number
18-38

Drawing Title
EXISTING FEATURES PLAN

Drawing Number
1 OF 5



PHASE A
PHASE A NOTES

1. ESTABLISH THE ENTRANCE EXIT AND HAUL ROAD INTO THE SITE AT DUNDAS STREET, ACCORDING TO THE APPROPRIATE MUNICIPAL STANDARDS. CONSTRUCT THE PROPOSED OFF-ROAD STORAGE BUILDING AND FUEL STORAGE IN THE AREA SHOWN.
2. PRIOR TO ANY ON SITE OPERATIONS, CONSTRUCT OR UPGRADE THE FENCING ON THE LICENSED BOUNDARIES TO THE STANDARDS OF THE AGGREGATE RESOURCES ACT (1.2m HIGH POST AND WIRE FENCE, EXCEPT WHERE SITE PLAN OVERRIDES ARE NOTED). ALL FENCING SHALL BE MAINTAINED.
3. CONSTRUCT THE HAUL ROAD THROUGH AREA 1 AND USE STRIPPED SOIL TO BEGIN CONSTRUCTION OF ACQUISITION BERM 1 AND 3.
4. PRIOR TO EXTRACTION IN AREA 1 AND 2, STRIP TOPSOIL AND OVERBURDEN SEPARATELY AND USE THE MATERIALS TO CONSTRUCT ACQUISITION BERM 1, 2A, 2B, 3, 4 AND 8 TO RECOMMENDED SPECIFICATIONS FOR PHASE A. EXCESS OVERBURDEN AND TOPSOIL MAY BE STORED IN STOCKPILES IN AREA 3.
5. BEGIN EXTRACTION OF AREA 1 AND 2 IN DIRECTION SHOWN. STOCKPILING AREA MAY BE TEMPORARILY LOCATED NEAR THE PIT FENCE DURING THE INITIAL EXTRACTION OF AGGREGATE.
6. UNDISTURBED PORTIONS OF AREAS 2, 3 AND 4 REMAIN IN AGRICULTURAL USE AND OPEN SPACE.
7. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS GROWING CONDITION.

OPERATIONS NOTES

GENERAL INFORMATION

1. THE PLAN depicts a schematic OPERATIONS AND REHABILITATION SEQUENCE FOR THIS PROPERTY BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION. PHASES SHOWN ARE SCHEMATIC AND MAY SLIGHTLY VARY WITH MATERIAL QUALITY, SITE HYDROLOGY AND HYDROGEOLOGY OR MARKET DEMAND. PHASES DO NOT REPRESENT ANY SPECIFIC OR EQUAL TIME PERIOD.
2. EXTRACTION SHALL GENERALLY FOLLOW THE SEQUENCE SHOWN. WHEN PARTIAL REHABILITATION OF A PHASE IS POSSIBLE IT SHALL BE CARRIED OUT, NOT WITHSTANDING THE EXTRACTION AND REHABILITATION PROCESS ABOVE. DEMAND FOR CERTAIN PRODUCTS OR BLENDING OF MATERIALS MAY REQUIRE SOME DEVIATION IN THE EXTRACTION AND REHABILITATION PHASING. ANY MAJOR DEVIATIONS FROM THE OPERATIONS SEQUENCE SHOWN WILL REQUIRE APPROVAL FROM MNRF.
3. SITE PLAN OVERRIDES ARE LISTED IN THE SITE PLAN OVERRIDE TABLE SHOWN ON THIS PAGE.

EXTRACTION/PROCESSING/HAULING INFORMATION

4. TOTAL AREA TO BE EXTRACTED IS 86.4 HECTARES.
5. MAXIMUM NUMBER OF TONNES OF AGGREGATE TO BE REMOVED FROM THE SITE IN ANY CALENDAR YEAR IS 400,000 TONNES.
6. EXTRACTION OF SAND AND GRAVEL ABOVE WATER TABLE WILL TAKE PLACE IN ONE OR TWO BENCHES, WITH A MAXIMUM HEIGHT OF 18 METRES. NO MORE THAN 50% OF THE SITE WILL BE DISTURBED AT ANY ONE TIME. THE GRADIENT FOR THE TABLE SHALL BE ESTIMATED TO BE BETWEEN 285.5 AND 289.0 MSL. SEE REPORT BY GROUNDWATER SCIENCE CORP. FRONT END LOADERS WILL BE USED TO EXTRACT MATERIAL AND HAUL TRUCKS OR CONVOYS WILL CARRY MATERIAL TO THE PLANT FOR FURTHER PROCESSING. REFER TO SECTIONS A-K, B-E, AND C-C ON DRAWING 4 OF 5 FOR FURTHER DETAILS.
7. PORTABLE PROCESSING EQUIPMENT, FOR CRUSHING AND SCREENING WILL BE USED ON SITE AND WILL BE LOCATED ON THE PIT FLOOR IN THE AREA SHOWN AT STREET 1P. CRUSHING MAY ONLY OCCUR IN THE AREA SHOWN (SEE ACQUISITION TECHNICAL RECOMMENDATIONS PAGE 3 OF 5). IN ADDITION TO CRUSHING, SITE ACTIVITIES WILL INCLUDE STOCKPILING AND REHABILITATION. ON-SITE EQUIPMENT MAY INCLUDE TRUCKS, LOADERS, EXCAVATOR, BACKHOES, BULLDOZERS, SCRAPPERS, CONVOYS AND OTHER RELATED EQUIPMENT. PROCESSING EQUIPMENT, STOCKPILERS AND PRODUCT STOCKPILES WILL NOT EXCEED 115 METRES IN HEIGHT AND WILL BE LOCATED IN THE AREAS SHOWN AND/OR CLOSE TO PIT FACES.
8. MATERIAL FROM OTHER PROPERTIES MAY BE IMPORTED INTO THE SITE FOR BLENDING, CUSTOM PRODUCTS AND/OR RESALE. THIS MAY INCLUDE AGGREGATE AND/OR PEAT AND TOPSOIL (IN AREA 2).
9. OFFICE/STORAGE BUILDING AND/OR SCALE/SCALEHOUSE MAY BE CONSTRUCTED WHERE SHOWN.
10. EQUIPMENT, SCRAP AND MACHINERY ASSOCIATED WITH THE EXTRACTION OPERATIONS WILL BE REMOVED UPON COMPLETION OF EXTRACTION.

HYDROGEOLOGICAL INFORMATION

11. THE WATER TABLE ELEVATION VARIES ACROSS THE LICENSE FROM APPROXIMATELY ±285.5 + ± 289m ABOVE SEA LEVEL (A.S.L.), BASED ON THE FEBRUARY 2021 HYDROGEOLOGICAL REPORT (SEE ABOVE). REFER TO SECTIONS ON SHEET 4 OF 5.
12. SURFACE DRAINAGE WILL BE DIRECTED TO LOW AREAS FOR WATER TO INFILTRATE INTO THE GRANULAR MATERIALS ON THE PIT FLOOR. THERE WILL BE NO OFF-SITE DITCHING/ DRAINAGE.

NOISE MITIGATION INFORMATION

13. DUE TO OPERATIONS:
SITE PREPARATION AND REHABILITATION: 07:00-19:00 WEEKDAYS; 07:00- NOON SATURDAYS
EXCAVATION AND PROCESSING: 07:00-19:00 WEEKDAYS; 07:00- NOON SATURDAYS
SHIPPING: 07:00-19:00 WEEKDAYS; 07:00- NOON SATURDAYS

AIR QUALITY INFORMATION

14. WATER OR CALCIUM CHLORIDE WILL BE APPLIED TO INTERNAL HAUL ROADS AND PROCESSING AREAS AS OFTEN AS REQUIRED TO MITIGATE DUST.

SITE MANAGEMENT INFORMATION

15. MAINTENANCE PROTECTION OF VEGETATION INFORMATION
EXISTING VEGETATION WITHIN THE LICENSED AREA SHALL BE MAINTAINED IN A HEALTHY VIGOROUS GROWING CONDITION UNTIL, REGULAR STRIPPING, REPAIRS OR UNTIL THE REHABILITATION IS COMPLETE. ANY VEGETATION PLANTED AS PART OF SITE IMPROVEMENTS OR PROGRESSIVE AND FINAL REHABILITATION WILL ALSO BE MAINTAINED IN A HEALTHY, VIGOROUS GROWING CONDITION.

FENCING INFORMATION

16. BOUNDARIES OF THE AREA TO BE LICENSED THAT ARE PRESENTLY FENCED ARE SHOWN ON DRAWING 1 OF 5. EXISTING FENCING, PRIOR TO ANY STRIPPING OR PREPARATION, FENCING ON THE LICENSED BOUNDARIES WILL BE UPGRADED TO 1.2m HIGH POST AND WIRE TO COMPLY WITH THE AGGREGATE RESOURCES ACT WHERE REQUIRED. UNFENCED BOUNDARIES SHALL BE DEMARCATED WITH HIGHLY VISIBLE MARKER POSTS AT 60m INTERVALS. 18 TIERED CONTROL FENCING WILL BE CONSTRUCTED ONCE STRIPPING OCCURS WITHIN 50m OF THE SETBACK ADJACENT TO THE UNNAMED DRAIN AND THE DRAIN LINE OF WOODLAND FEATURES AND SHALL BE MAINTAINED UNTIL ADJACENT AREA A STABLE AND VEGETATED. ALL FENCING SHALL BE MAINTAINED.

TOPSOIL/SUBSOIL/OVERBURDEN STORAGE INFORMATION

17. TOPSOIL AND OVERBURDEN SHALL BE STRIPPED AND STORED SEPARATELY IN BERM WHERE SHOWN AND IN THE STOCKPILING AREA AS SHOWN. TOPSOIL CANNOT BE REMOVED WITHOUT WRITTEN PERMISSION FROM PROPERTY OWNER.

BERM INFORMATION

18. BERM SHALL BE A MINIMUM OF 2.5 METRES ABOVE THE EXISTING GRADE, OR AS SPECIFIED IN THE HOC ENGINEERING LIMITED NOISE ASSESSMENT REPORT DATED FEBRUARY 2021 AND SHOWN ON OPS PLAN. BERM SHALL NOT EXCEED 2.1. REFER TO TYPICAL BERM CROSS SECTION ON DRAWING 4 OF 5. DETAILS AND SECTIONS. ALL BERM SHALL BE SEEDING USING GRASS/LEGUME MIXTURE. SEE REHABILITATION PLAN, NOTE #7 IMMEDIATELY UPON COMPLETION TO MINIMIZE NOISE, DUST AND EROSION.
19. ON COMPLETION OF THE BERMS, EXCESS ON-SITE OVERBURDEN WILL BE USED TO PROGRESSIVELY BACKFILL AND REHABILITATE THE SITE. TOPSOIL CAN BE TEMPORARILY STOCKPILED ON THE PIT FLOOR.

SCRAP STORAGE INFORMATION

20. ALL SCRAP, USED MACHINERY AND STUMPS GENERATED THROUGH THE OPERATIONS WITHIN THIS LICENSE WILL BE STORED IN THE SCALE AREA AS SHOWN. A MINIMUM OF 50m FROM THE BOUNDARY OF THE SITE AND NOT WITHIN 50m OF ANY BODY OF WATER AND SHALL BE DEPOSITED ON AN ONGOING BASIS. STUMPS WOODY MATERIAL MAY BE CHIPPED AND USED FOR SOIL ENHANCEMENT DURING PROGRESSIVE REHABILITATION. THESE WILL BE HARVESTED AND SOLD AS LUMBER OR TILLED FOR FIREWOOD AND ON THEIR BEST USE. UPON COMPLETION OF EXTRACTION, ALL SCRAP EQUIPMENT AND USED MACHINERY SHALL BE REMOVED.

PETROLEUM STORAGE INFORMATION

21. FUEL, OIL, GREASE, ANTIFREEZE, LUBRICANTS AND OTHER CHEMICALS NEEDED FOR THE MAINTENANCE AND FUNCTIONING OF ON-SITE AGGREGATE PROCESSING EQUIPMENT SHALL BE APPROPRIATELY STORED IN ABOVEGROUND CONTAINERS AND SHALL MEET THE REQUIREMENTS OF THE GASOLINE HANDLING ACT, AS AMENDED, AND THE GASOLINE HANDLING CODE AND REGULATIONS, AS AMENDED BY THE TECHNICAL STANDARDS AND SAFETY ACT (TERRA) LUBRICANTS HANDLING CODE, AND ACCORDANCE WITH THE MINISTRY OF THE ENVIRONMENT, CONSERVATION, AND PARKS CHEMICAL STORAGE GUIDELINES. ALL REFUELLING SHALL BE WITHIN A CONTAINED TANK. ALL SPILLS TO THE ENVIRONMENT MUST BE REPORTED TO THE SPILLS ACTION CENTRE OF MECP. ANY SPILL SHALL BE REMOVED AND DISPOSED OF AT AN APPROPRIATE MECP-APPROVED FACILITY.

IMPORTATION OF FILL INFORMATION

22. IN ORDER TO MAXIMIZE RESOURCE RECOVERY, IMPORTATION OF CLEAN INERT FILL (EO, TOPSOIL, AND/OR OVERBURDEN) MAY BE IMPORTED TO FACILITATE A 1.1% SLOPE REHABILITATION. (SLOPE WATER TABLE SLOPES, OPS). ONLY NATIVE ON-SITE OVERBURDEN AND/OR OFF-SITE MATERIALS WILL BE USED FOR BELOW WATER REHABILITATION. ONLY SUFFICIENT MATERIAL TO CREATE FINAL GRADES AS SHOWN MAY BE IMPORTED.
23. IMPORTED MATERIAL SHALL MEET THE MINISTRY OF THE ENVIRONMENT, CONSERVATION, AND PARKS PARAMETERS UNDER TABLE 1 OF MECP'S SOIL, GROUND WATER AND SEDIMENT STANDARDS FOR USE UNDER PART XV. OF THE ENVIRONMENTAL PROTECTION ACT.

24. SAMPLING AND TESTING OF ALL IMPORTED MATERIAL SHALL BE PERFORMED AT SOURCE PRIOR TO THE IMPORTATION OF MATERIAL ON TO THE LICENSED SITE BY A QP UNDER EPA. A QP SHALL ALSO DESIGN FILL MONITORING PROGRAM (PER L3 NOTES). RANDOM SAMPLING OF ALL IMPORTED MATERIAL SHALL BE CONDUCTED AT THE REQUEST OF MNRF.
25. THE LICENSEE SHALL KEEP DETAILED RECORDS OF THE AMOUNT OF MATERIAL BROUGHT ON SITE FOR REHABILITATION AND THE TESTING RESULTS OF ALL SAMPLES. ALL RECORDS AND TESTING RESULTS SHALL BE AVAILABLE UPON REQUEST BY MNRF OR MECP.

WASH PLANT INFORMATION

26. SHOULD A WASH PLANT BE REQUIRED WITH A PREDICTED WATER USAGE OF 50,000 L/Day OR MORE, THE PRODUCER SHALL OBTAIN PERMIT TO TAKE WATER FROM MECP AND HAVE IT READY FOR INSPECTION. THE PERMIT TO TAKE WATER (PTTW) WILL BE ACCOMPANIED BY THE APPROPRIATE SUPPORTING DOCUMENTATION.

BUILDING REMOVAL

27. BUILDING # 20 SHALL BE VACATED OR DEMOLISHED PRIOR TO EXTRACTION. SHOULD BUILDING 19 AND 20 BE DEMOLISHED, A PERMIT SHALL BE OBTAINED FROM THE MUNICIPALITY.

LEGEND

- BOUNDARY OF AREA TO BE LICENSED
- 120m INFORMATION BOUNDARY
- EXISTING LICENSED AREA
- LOT LINE
- REGULATORY SETBACK LINE
- WATERCOURSE
- EXISTING 8m CONTOUR LINE
- EXISTING 1m CONTOUR LINE
- EXISTING SPOT ELEVATION
- EXISTING VEGETATION
- EXTRACTION FACE
- BERM (MIN. HEIGHT AS SHOWN)
- UNDISTURBED AREA
- AREA STRIPPED OF TOPSOIL AND OVERBURDEN
- SILT FENCE
- EXISTING BUILDING
- EXISTING HYDRO POLE
- DIRECTION OF SURFACE WATER DRAINAGE
- ENTRANCE EXIT
- DIRECTION OF EXTRACTION
- DIRECTION OF TOPSOIL AND OVERBURDEN MOVEMENT
- PRODUCT TRANSPORTATION VIA HAUL ROAD
- LOCATION OF NOISE RECEPTOR
- EXISTING ELEVATION PROPOSED ELEVATION
- PROPOSED MARKER POST
- EXISTING BORERHOLE MONITORING WELL, NOT CALLED BY ENCLOSE DECEMBER 6 & 7, 2018
- BORERHOLE MONITORING WELL INSTALLED BY ENCLOSE MAY 15, 2020

SITE PLAN OVERRIDE (VARIANCE)

THE FOLLOWING CONDITIONS ILLUSTRATED ON THESE PLANS VARY FROM THE OF THE PROVINCIAL STANDARDS MADE UNDER THE AGGREGATE RESOURCES ACT

ITEM	SECTION
1. IN THE SOUTH AREA, SETBACK IS REDUCED TO 0m ALONG THE COMMON NORTH PART OF THE WEST BOUNDARY PER SIGNED BOUNDARY AGREEMENT WITH ADJACENT LICENSEE, ALONG THE WEST PART OF NORTH BOUNDARY PER SIGNED BOUNDARY AGREEMENT WITH ADJACENT LANDOWNER, ALONG THE NORTH AND NORTHEAST BOUNDARY OF R6 PROPERTY SETBACK IS REDUCED TO 5m PER SIGNED BOUNDARY AGREEMENT WITH ADJACENT LANDOWNER.	5.10
2. STOCKPILING MAY OCCUR WITHIN THE 30m OF THE WEST, EAST, AND NORTH BOUNDARY OF THE SOUTH AREA PER AGREEMENTS WITH THE ADJACENT LICENSEE AND LANDOWNERS.	5.13.1
3. IN THE SOUTH AREA, FENCING WILL BE OMITTED ON THE SOUTHERN 1.20m OF THE WEST BOUNDARY, 1.40m OF THE WEST END OF THE SOUTH BOUNDARY AND NORTHERN 1.35m OF THE EAST BOUNDARY. ACCESS IS PROHIBITED BY EXISTING FORESTED AREAS. FENCING WILL BE OMITTED ON THE SHARED WEST AND SOUTH HALF OF THE EAST BOUNDARY PER AGREEMENTS WITH THE ADJACENT LANDOWNERS.	5.1
IN THE NORTH AREA FENCING WILL BE OMITTED ALONG THE EAST AND SOUTH FENCED PORTION OF THE WEST BOUNDARY TO ALLOW CONTINUED AGRICULTURAL USES AND PER AGREEMENTS WITH ADJACENT LANDOWNERS.	
UNFENCED BOUNDARIES SHALL BE DEMARCATED WITH HIGHLY-VISIBLE MARKER POSTS WHERE POSSIBLE.	



41 Main Street, Unit 102
Unionville, Ontario L3R 2E5
Tel: 905-294-8232 Fax: 905-294-7233
www.harringtonmavon.com

Project Name

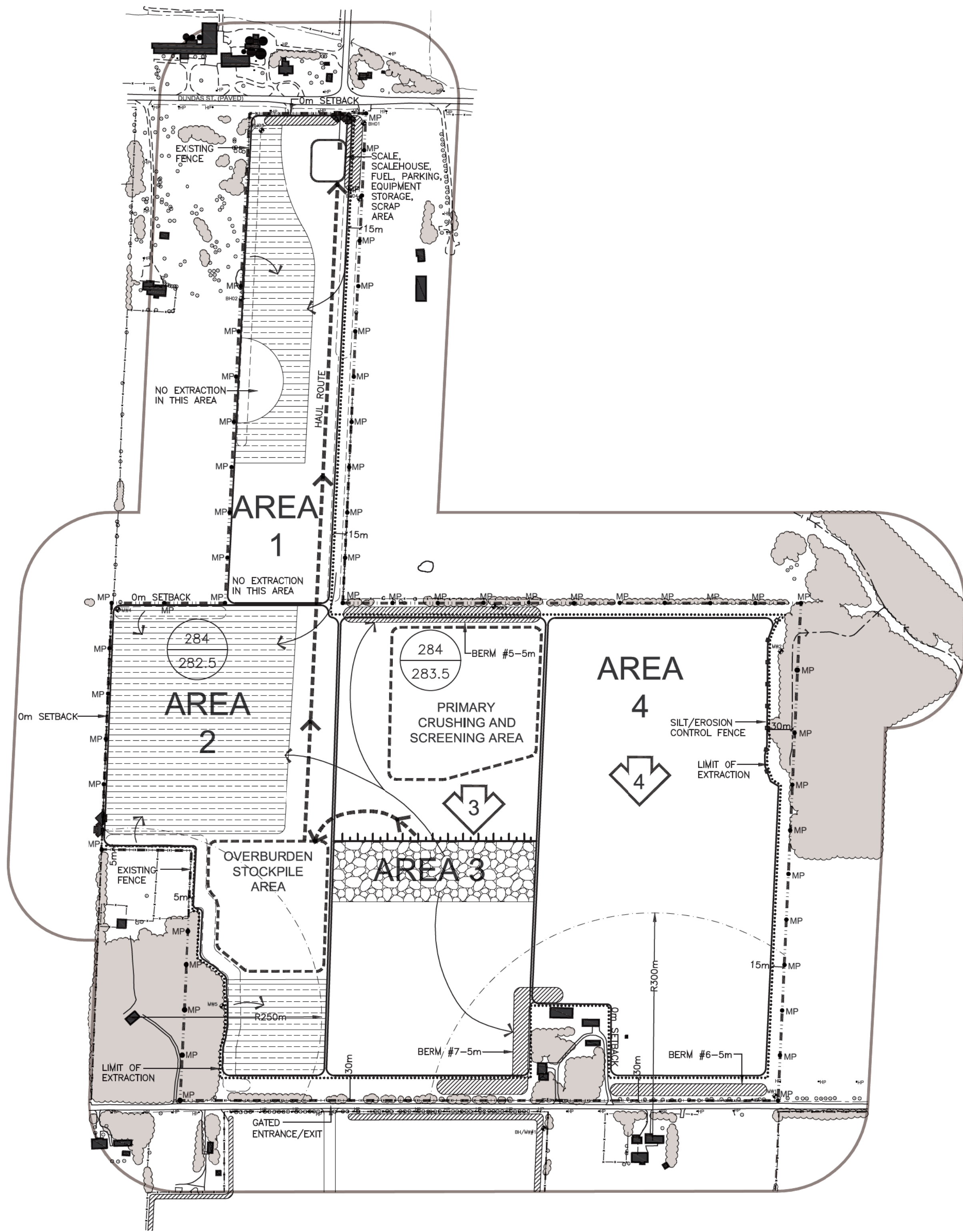


LICENCE No. 626167
APPLICANT'S SIGNATURE: [Signature]
PART LOTS 16 AND 17 CONCESSION 1 NTR
MUNICIPALITY OF THAMES CENTRE
(FORMERLY NORTH DORCHESTER), COUNTY OF MIDDLESEX

Scale 1:2000 0 10 50 80m	North [North Arrow]	Stamp [Professional Engineer Stamp]
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Drawing Status SUBMITTED TO MNRF FOR APPROVAL	Drawn SB Checked BJ	Issue Date MAR 2021
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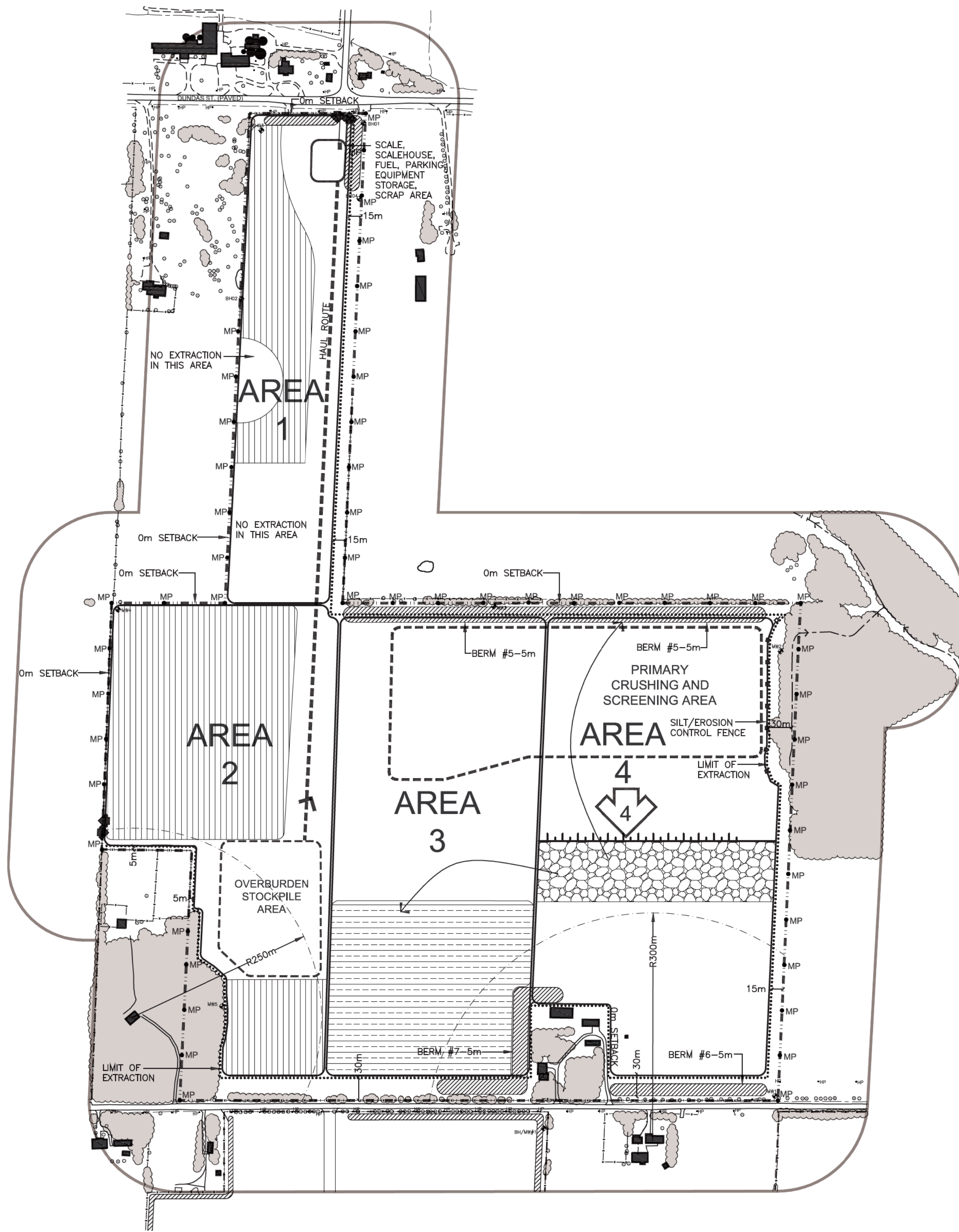
Drawing Title OPERATIONAL PLAN	Project Number 18-38	Drawing Number 2 OF 5
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PHASE B

PHASE B NOTES

1. COMPLETE EXTRACTION IN AREA 1 AND AREA 2
2. BEGIN PROGRESSIVE REHABILITATION IN AREA 1 USING MATERIAL IN BERMS 2A, 3 AND 4 AS SHOWN.
3. BEGIN STRIPPING TOPSOIL AND OVERBURDEN SEPARATELY FROM AREA 3. USE THE MATERIAL TO CONSTRUCT ACQUEDUCT BERMS 5, 6, AND 7 AS SHOWN AND TO BEGIN PROGRESSIVE REHABILITATION IN AREA 2.
4. CONTINUE PROGRESSIVE REHABILITATION IN AREA 3 WITH MATERIAL FROM BERMS 2B AND 8 AS SHOWN.
5. UNDISTURBED PORTIONS OF AREAS 3 AND 4 TO REMAIN IN AGRICULTURAL USE.
6. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS GROWING CONDITION.



PHASE C

PHASE C NOTES

1. COMPLETE EXTRACTION IN AREA 3.
2. BEGIN STRIPPING TOPSOIL AND OVERBURDEN SEPARATELY FROM AREA 4. USE THE MATERIAL TO CONTINUE CONSTRUCTION OF BERMS 5 AND TO BEGIN PROGRESSIVE REHABILITATION IN AREA 3.
3. BEGIN EXTRACTION IN AREA 4, IN DIRECTION SHOWN.
4. UNDISTURBED PORTIONS OF AREA 4 TO REMAIN IN AGRICULTURAL USE.
5. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS GROWING CONDITION.

PHASE D NOTES (NOT SHOWN)

1. COMPLETE EXTRACTION IN AREA 4.
2. BEGIN PROGRESSIVE REHABILITATION OF AREA 4 USING MATERIAL STORED IN PERIMETER BERMS.
3. REMOVE SCALE AND SCALE HOUSE AND ALL SCRAP AND EQUIPMENT.
4. COMPLETE REHABILITATION OF ALL AREAS USING TOPSOIL AND OVERBURDEN STOCKPILED IN BERMS.
5. REHABILITATE ALL INTERNAL HAUL ROADS.
6. RETURN SITE TO AGRICULTURAL USE.

TECHNICAL RECOMMENDATIONS

THE FOLLOWING ARE THE TECHNICAL RECOMMENDATIONS FROM ALL OF THE EXPERTS' REPORTS AS OF DECEMBER 2010. ADDITIONAL RECOMMENDATIONS MAY BE INCLUDED AS A RESULT OF THE LICENSE REVIEW PROCESS.

ARCHAEOLOGICAL ASSESSMENT - TRIMMS MARTELLE HERITAGE CONSULTANTS INC. - JUNE 2010
SHOULD PREVIOUSLY UNDOCUMENTED (I.E., UNKNOWN OR DEEPLY BURIED) ARCHAEOLOGICAL RESOURCES BE DISCOVERED, THEY MAY BE A NEW ARCHAEOLOGICAL SITE AND THEREFORE SUBJECT TO SECTION 46 (1) OF THE ONTARIO HERITAGE ACT. THE PROPRIETOR OR PERSON DISCOVERING THE ARCHAEOLOGICAL RESOURCES MUST CEASE ALL ALTERATION OF THE SITE IMMEDIATELY AND ENGAGE A LICENSED CONSULTANT ARCHAEOLOGIST TO CARRY OUT ARCHAEOLOGICAL RELEVANCE, IN COMPLIANCE WITH SECTION 46 (1) OF THE ONTARIO HERITAGE ACT. FURTHER ARCHAEOLOGICAL SITE RECOMMENDATIONS FOR FURTHER ARCHAEOLOGICAL RELEVANCE OR PROTECTION REMAIN SUBJECT TO SECTION 46 (1) OF THE ONTARIO HERITAGE ACT AND MAY NOT BE ALTERED, OR HAVE ANY EFFECTS REMOVED FROM THEM, EXCEPT BY A PERSON HOLDING AN ARCHAEOLOGICAL LICENSE.

THE FUNERAL, BURIAL, AND CREMATION SERVICES ACT, 2002, NO. 3002, C-33 REQUIRES THAT ANY PERSON DISCOVERING HUMAN REMAINS MUST NOTIFY THE POLICE OR CORONER AND THE REGISTRAR OF CEMETERIES AT THE MINISTRY OF SMALL BUSINESS AND CONSUMER SERVICES. THE REGISTRAR OF CEMETERIES, CEMETERIES REGULATION UNIT CAN BE REACHED AT (416)328-6444 OR (416)328-2433.

HYDROLOGICAL ASSESSMENT - GROUNDWATER SCIENCE CORP. DATED FEBRUARY 2021
1. WHERE THE MINISTRY OF NATURAL RESOURCES AND FORESTRY WITH THE ASSISTANCE OF THE MINISTRY OF THE ENVIRONMENT CONSERVATION AND PARKS, ACCORDING TO EXISTING WATER WELL INTERFERENCE COMPLIANT PROTOCOLS, HAS DETERMINED THAT THE OPERATION OF THE PIT HAS CAUSED ANY WELL WATER TO BE ADVERSELY AFFECTED, THE LICENSEE SHALL, AT THE LICENSEE'S EXPENSE, EITHER DEEPEN THE WELL OR REPLACE THE WELL TO ENSURE THAT HISTORIC WATER PRODUCTION QUALITY STANDARDS ARE MAINTAINED FOR THAT WELL. IF THIS PIT OPERATION HAS CAUSED A WATER SUPPLY PROBLEM, THE LICENSEE SHALL, AT THEIR EXPENSE, ENSURE A CONTINUOUS SUPPLY OF POTABLE WATER TO THE AFFECTED LANDOWNER.

IN ORDER TO CONFIRM WATER TABLE ELEVATIONS AT THE SITE, THE FOLLOWING MONITORING PROGRAM IS RECOMMENDED:

1. DURING OPERATIONAL YEARS WATER LEVEL MEASUREMENTS SHALL BE OBTAINED ON A QUARTERLY (SEASONAL) BASIS AT MW1, MW2, MW3, MW4, MW5, MW6 AND MW7, AS ACCESSIBLE.
2. DURING OPERATIONAL YEARS ANNUAL WATER QUALITY SAMPLES FOR GENERAL PARAMETERS (ANIONS AND METALS) AND PETROLEUM HYDROCARBONS SHALL BE OBTAINED AT MW5 AS ACCESSIBLE.
3. DURING OPERATIONAL YEARS THE MONITORING RESULTS WILL BE SUMMARIZED AND SUBMITTED IN AN ANNUAL REPORT TO THE MINISTRY OF NATURAL RESOURCES AND FORESTRY. THE WATER LEVEL MONITORING RESULTS WILL BE REVIEWED TO DETERMINE IF ADJUSTMENTS ARE NEEDED TO EXTRACTION DEPTHS AS OPERATIONS PROCEED IN ORDER TO ENSURE REHABILITATION PLANS CAN BE ACHIEVED AS PROPOSED.

NATURAL ENVIRONMENT ASSESSMENT - MTE CONSULTANTS DATED JANUARY 20, 2021

RECOMMENDATION 1:
DURING EXTRACTION OPERATIONS, INDIRECT IMPACTS TO THE UNNAMED DRAIN WILL BE FURTHER PROTECTED USING SEDIMENT AND EROSION CONTROL FENCING. THIS MITIGATION MEASURE WILL ENSURE THAT THERE ARE NO IMPACTS TO THE ADJACENT FEATURE FROM SURFACE RUNOFF ON SITE. SPECIFICS OF THE EROSION AND SEDIMENT CONTROL MEASURES THAT WILL BE USED AND ADDITIONAL MITIGATION MEASURES ARE DETAILED ON THE SITE PLAN FOR THE PROPOSED AGGREGATE EXTRACTION.

ADDITIONAL RECOMMENDED MITIGATION MEASURES FOR POTENTIAL INDIRECT IMPACTS HAVE BEEN PROVIDED BELOW. THESE MEASURES ARE BIOLOGICAL RECOMMENDATIONS AND ARE FOR THE PROTECTION AND MITIGATION OF POTENTIAL INDIRECT IMPACTS TO SWH AND SEGMENTATION.

PRIOR TO EXTRACTION
RECOMMENDATION 2:
THE AGGREGATE EXTRACTION OPERATION SHALL NOT EXTEND BEYOND THE DEFINED SETBACKS TO AVOID ENCRoACHMENT INTO THE ADJACENT VEGETATION COMMUNITIES AND TO AVOID ACCIDENTAL VEGETATION REMOVAL AND SPECIES DISTURBANCE (BAY MATERNITY ROOST TREES). TO DETERMINE THE LIMITS OF EXTRACTION, MARKER POSTS ALONG THE DEFINED EXTRACTION LIMIT SHALL BE INSTALLED PRIOR TO SITE PREPARATION.

POST EXTRACTION
RECOMMENDATION 3:
SEDIMENT AND EROSION CONTROL FENCING SHOULD NOT BE REMOVED UNTIL RE-VEGETATION AND SOIL STABILIZATION HAS OCCURRED TO LIMIT SEGMENTATION OF THE MUNICIPAL DRAINAGE FEATURES AND WOODLAND POST EXTRACTION.

ACOUSTICAL ASSESSMENT - HGC ENGINEERING - FEBRUARY 2021

1. THE FOLLOWING TABLE PRESENTS THE REFERENCE SOUND LEVELS USED FOR THE ACOUSTIC MODELING PRESENTED. THESE SOUND LEVELS WERE BASED ON SITE MEASUREMENTS OF SIMILAR PROCESSING EQUIPMENT TO BE USED IN THIS PIT.

EQUIPMENT	REFERENCE AVERAGE 'A' WEIGHTED SOUND POWER LEVEL
A CRUSHING PLANT AND TWO ASSOCIATED LOADERS (COMBINED)	117 dBA (76 dBA, SPL AT 50m)
A SCREENING PLANT AND AN ASSOCIATED LOADER (COMBINED)	107 dBA (66 dBA, SPL AT 50m)
A LOADER/EXCAVATOR	103 dBA (62 dBA, SPL AT 50m)

IF OTHER EQUIPMENT IS PROPOSED FOR OPERATION IN THE GRAVEL PIT, IT SHALL BE CONFIRMED THROUGH MEASUREMENT TO PRODUCE SOUND LEVELS CONSISTENT WITH THE ABOVE REFERENCE SOUND LEVELS OR ADDITIONAL MITIGATION MEASURES MAY BE REQUIRED.

2. PERIMETER BERMS SHALL BE CONSTRUCTED ALONG THE PROPERTY LINES AS SHOWN. THE MINIMUM BERM HEIGHTS AND TIMING OF CONSTRUCTION ARE SUMMARIZED IN TABLE BELOW:

BERM No.	MINIMUM BERM HEIGHT ABOVE EXISTING GRADE (m)	TIMING OF BERM CONSTRUCTION
1	3.0 m	PRIOR TO EXTRACTION ACTIVITIES IN AREA 1
2	3.0 m	PRIOR TO EXTRACTION ACTIVITIES IN AREA 1
2B	2.5 m IF NO CRUSHING ZONE IN AREA 2 4 m IF CRUSHING ZONE IN AREA 2	PRIOR TO EXTRACTION AND/OR PROCESSING ACTIVITIES IN AREA 2
3	3.0 m	PRIOR TO EXTRACTION ACTIVITIES IN AREA 1
4	4.0 m	PRIOR TO EXTRACTION AND/OR PROCESSING ACTIVITIES IN AREA 2
5	3.0 m	PRIOR TO PROCESSING ACTIVITIES IN AREAS 3 AND 4
6	4.0 m	PRIOR TO EXTRACTION AND/OR PROCESSING ACTIVITIES IN AREAS 3 AND 4
7	3.0 m	PRIOR TO EXTRACTION AND/OR PROCESSING ACTIVITIES IN AREAS 3 AND 4
8	4.0 m	PRIOR TO EXTRACTION AND/OR PROCESSING ACTIVITIES IN AREAS 3 AND 4

3. NO PROCESSING ACTIVITIES SHALL BE CONDUCTED WITHIN AREA 1.

4. THE CRUSHING PLANT SHALL BE LOCATED WITHIN THE PROCESSING AREAS ONLY AS INDICATED IN THE OPERATIONAL PLAN.

5. MINIMUM 1 M HIGH ACOUSTICAL BARRIERS SHALL BE CONSTRUCTED ON THE PIT FLOOR BESIDE THE CRUSHING PLANT IN THE DIRECTION OF R6 TO R5.

6. THE SCREENING PLANT SHALL NOT BE OPERATED WITHIN 250 M OF R6 AND 300 M OF R7.

7. MINIMUM 1 M HIGH ACOUSTICAL BARRIERS SHALL BE CONSTRUCTED ON THE PIT FLOOR BESIDE THE SCREENING PLANT IN THE DIRECTION OF R6 TO R5.

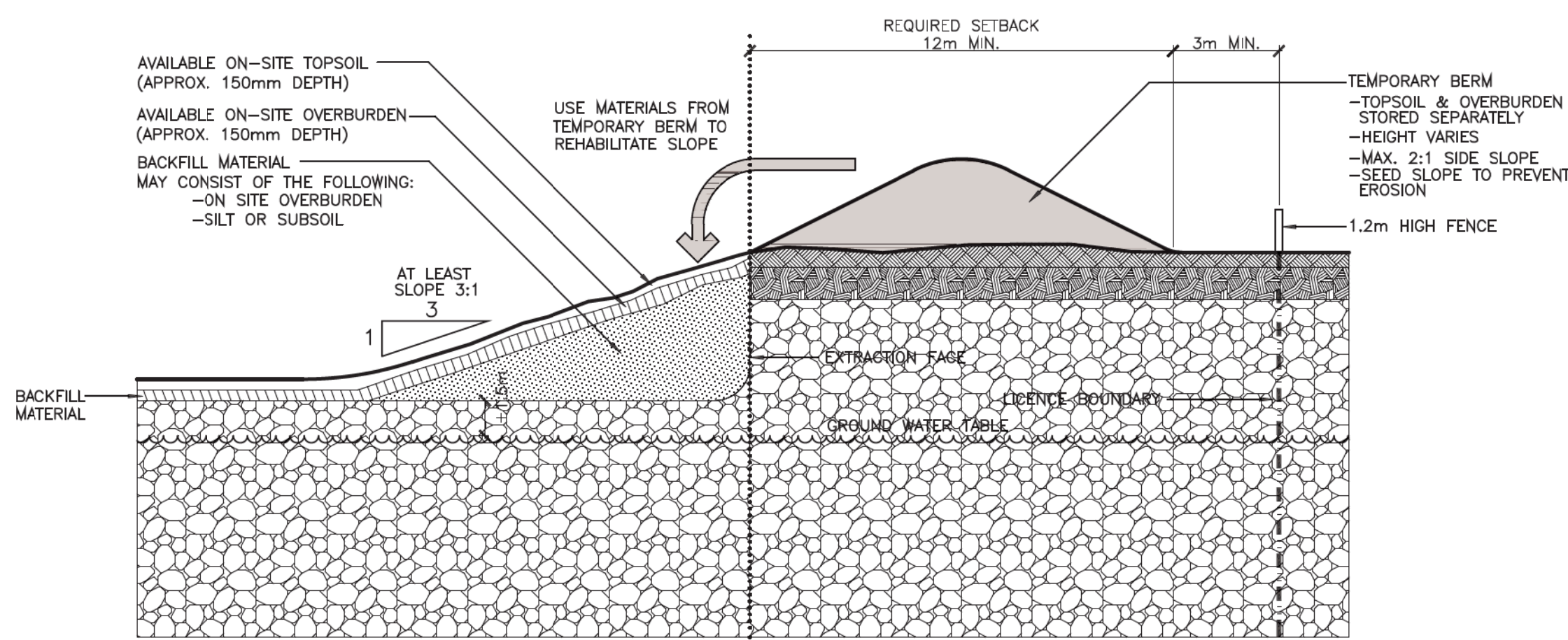
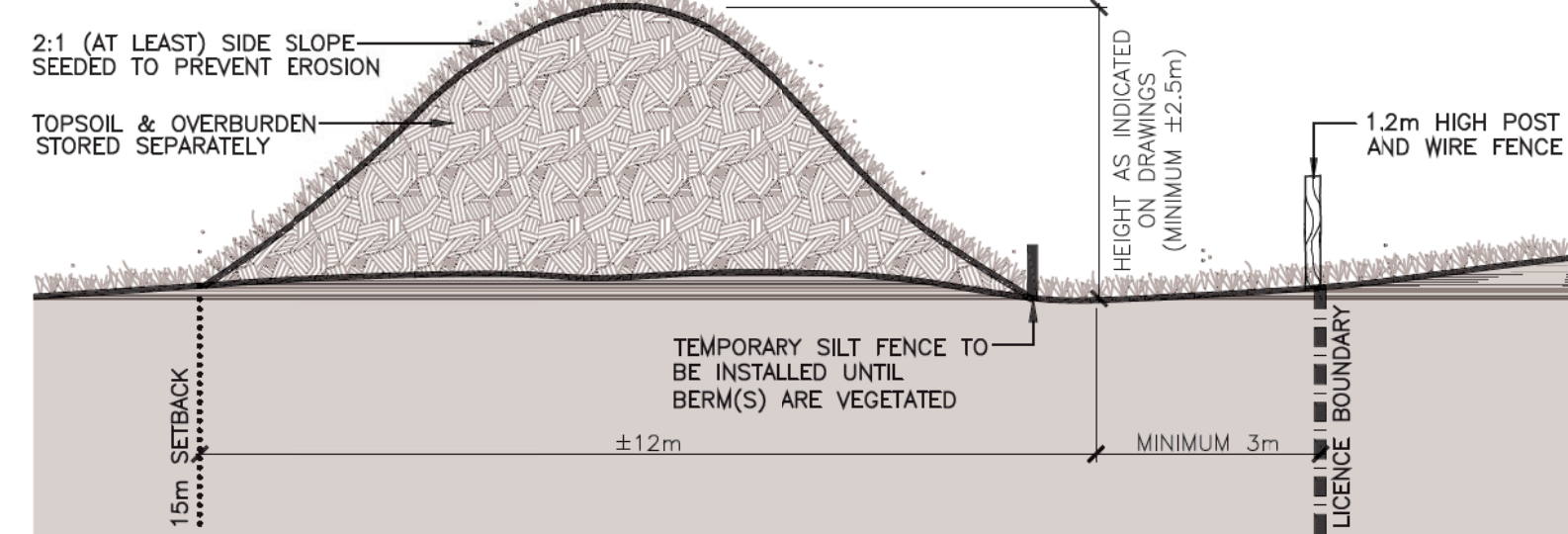
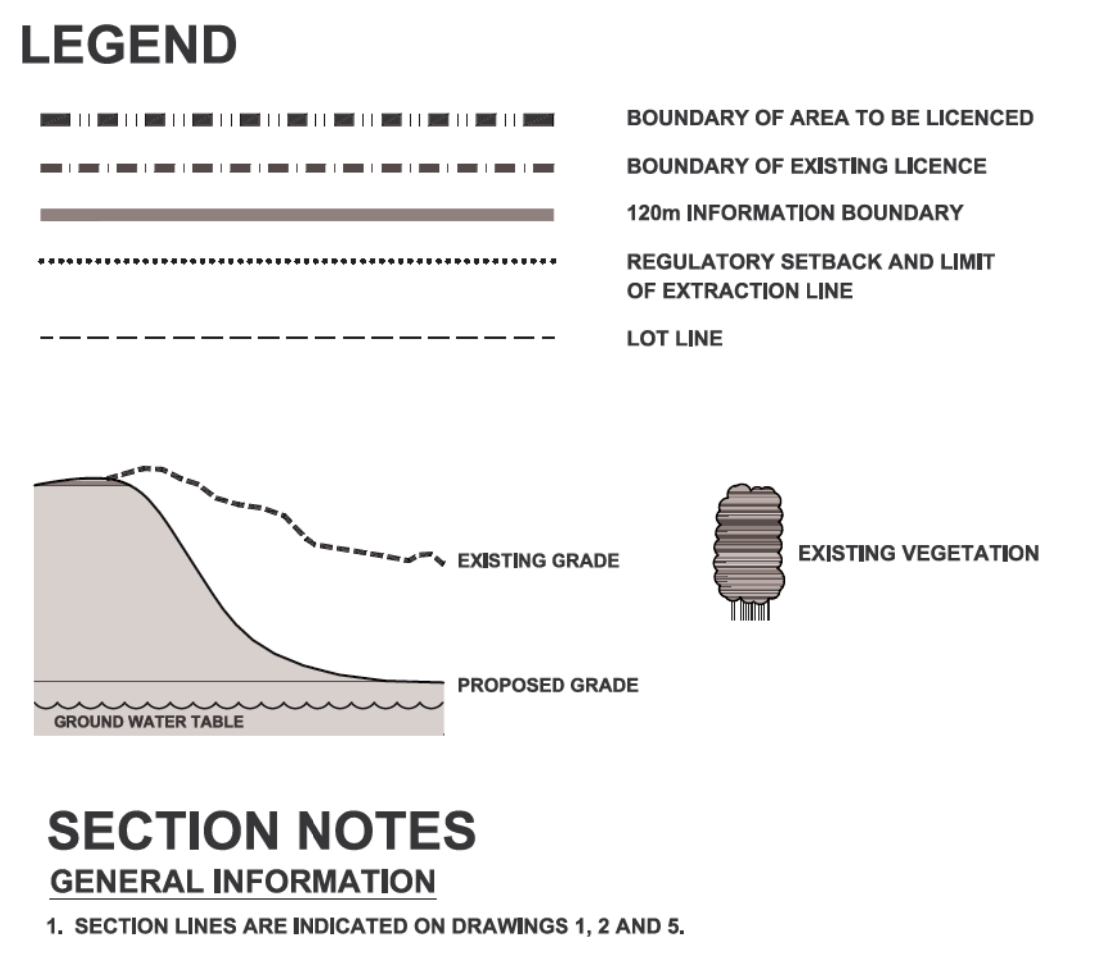
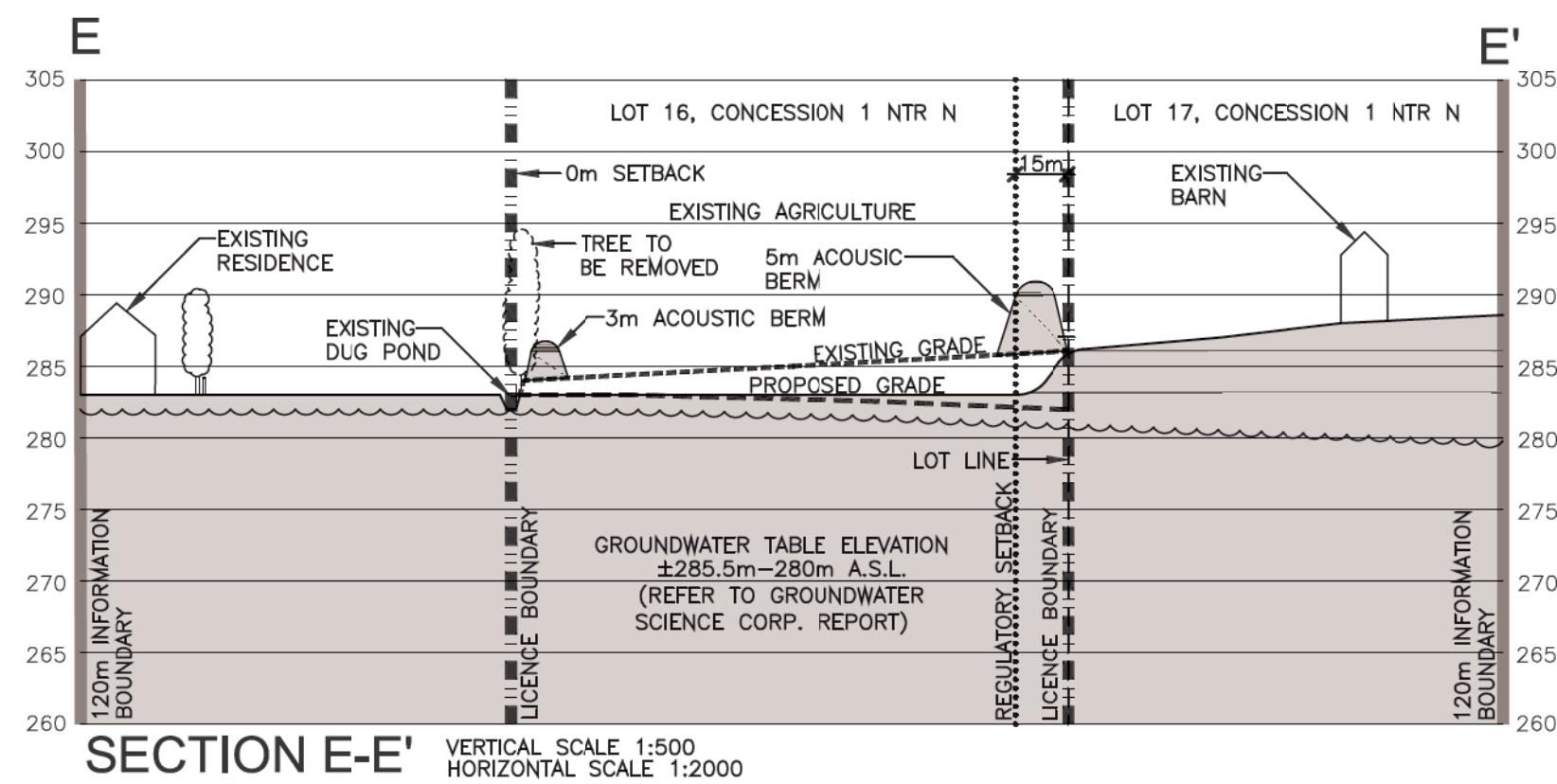
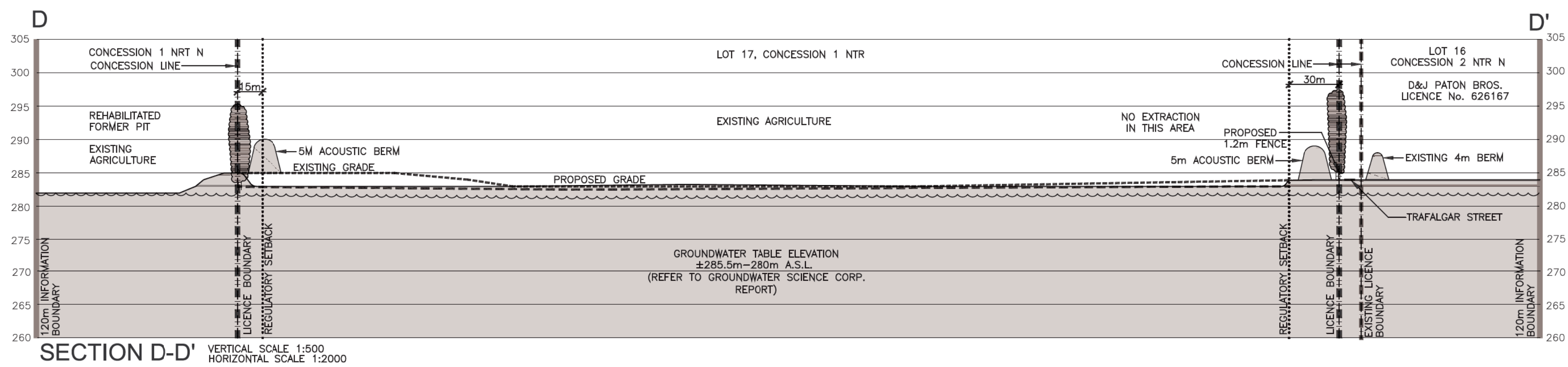
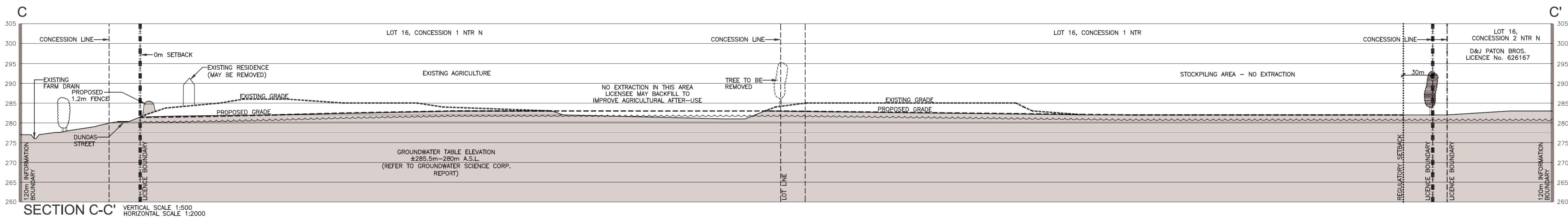
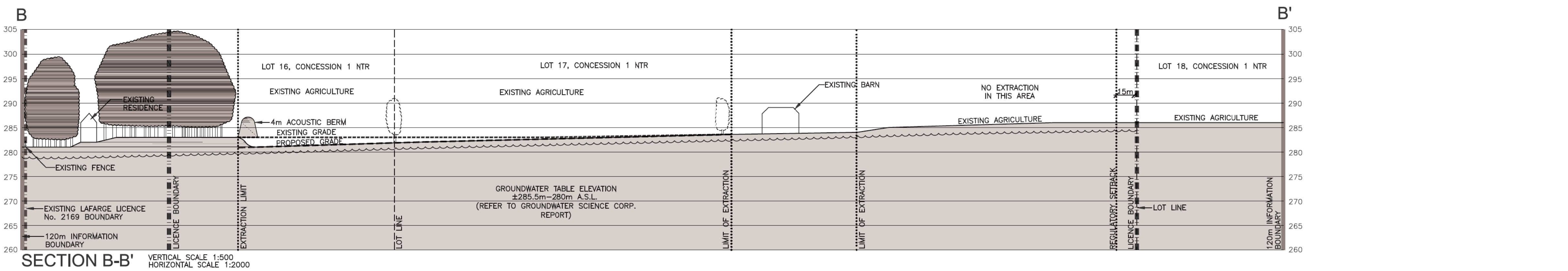
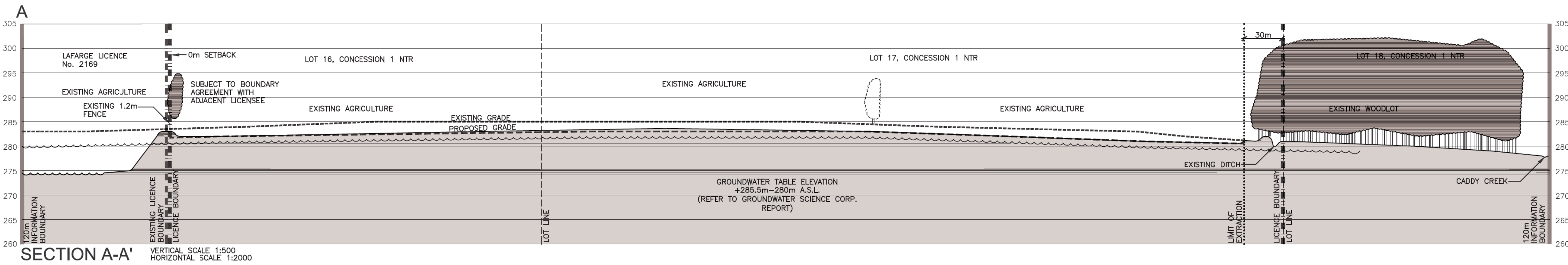
8. THE ACOUSTICAL BARRIERS MENTIONED ABOVE COULD BE COMPRISED OF AN EARTH BERM, A NOISE WALL, AGGREGATE STOCKPILES OR ANY OTHER CONSTRUCTION WITH A MINIMUM SURFACE DENSITY OF 20 KG/M.

9. ACTIVITIES USED TO PREPARE THE SITE FOR EXCAVATION, SUCH AS THE STRIPPING OF TOPSOIL AND CONSTRUCTION OF BERMS OR ACTIVITIES RELATED TO THE REMEDIATION OF THE SITE AFTER THE EXTRACTION IS COMPLETED ARE CONSIDERED TO BE CONSTRUCTION ACTIVITIES. THEY ARE REGULATED UNDER MUNICIPAL BYLAWS AND NOT CITY SOUND LEVEL LIMITS OR NOTICED CONSTRUCTION EQUIPMENT.

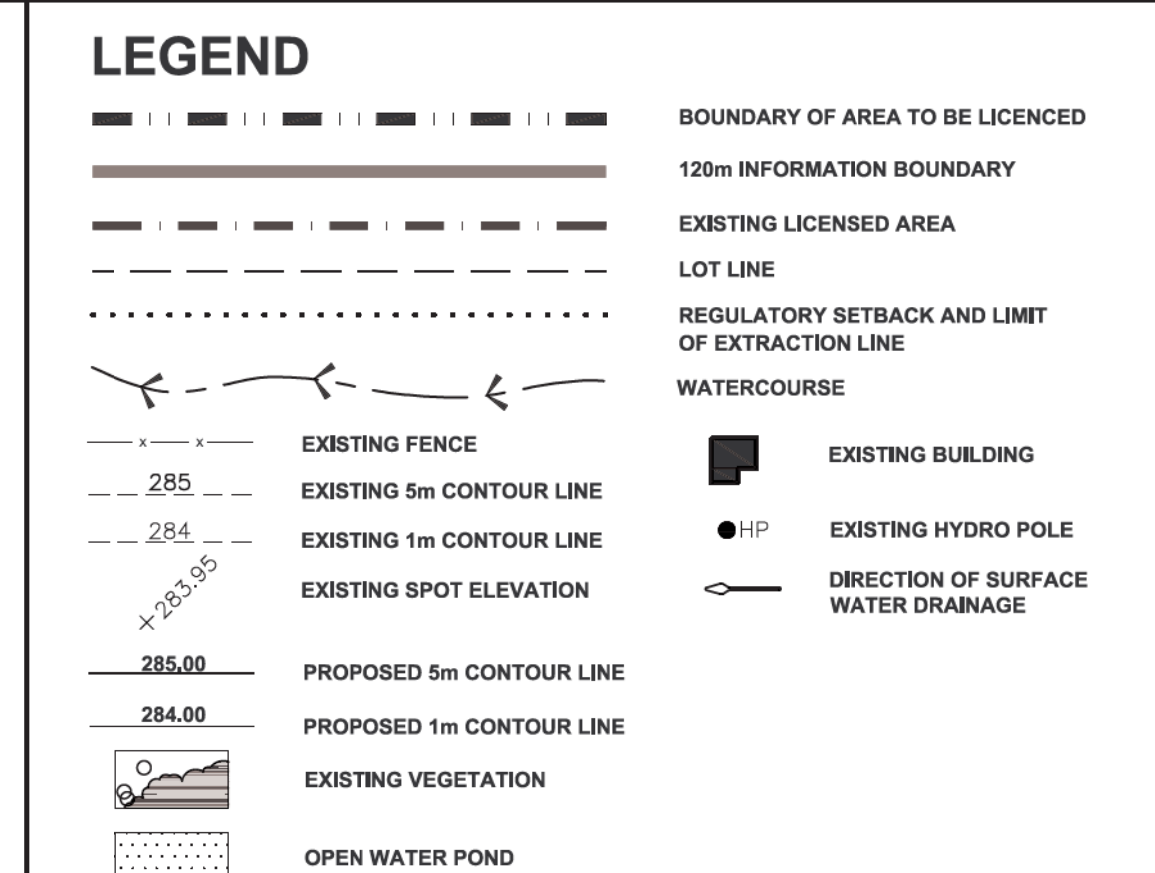
10. ANY PROPOSED CHANGES TO THE ASPECTS OF THE EXTRACTION, PROCESSING AND SHIPPING OPERATIONS DEALT WITH ABOVE AS RELATING TO NOISE CONTROL, SHALL BE REVIEWED BY A QUALIFIED ACOUSTICAL CONSULTANT FOR COMPLIANCE WITH THE RELEVANT NOISE CRITERIA.

LEGEND

BOUNDARY OF AREA TO BE LICENSED	EXISTING BUILDING
120m INFORMATION BOUNDARY	EXISTING HYDRO POLE
EXISTING LICENSED AREA	DIRECTION OF SURFACE WATER DRAINAGE
REGULATORY SETBACK AND LIMIT OF EXTRACTION LINE	ENTRANCE/EXIT
WATERCOURSE	DIRECTION OF TOPSOIL AND OVERBURDEN MOVEMENT
EXISTING FENCE	PRODUCT TRANSPORTATION VIA HAUL ROAD
EXISTING 5m CONTOUR LINE	R3 LOCATION OF NOISE RECEPTOR
EXISTING 1m CONTOUR LINE	EXISTING ELEVATION
EXISTING SPOT ELEVATION	PROPOSED ELEVATION
EXISTING VEGETATION	PROPOSED MARKER POST
EXTRACTION FACE	EXISTING BOREHOLE MONITORING WELL
BERM (MIN. HEIGHT AS SHOWN)	MONITORING WELL INSTALLED BY ENGLORE DECEMBER 6, 7, 2018
UNDISTURBED AREA	BOREHOLE MONITORING WELL INSTALLED BY ENGLORE MAY 19, 2020
AREA STRIPPED OF TOPSOIL AND OVERBURDEN	
SILT FENCE	
AREA UNDER REHABILITATION	
REHABILITATION COMPLETE	



<p>Pre Licence Review</p> <p>Site Plan Amendments</p>	
<p>Harrington Avan Ltd</p> <p>41 Main Street, Unit 102 Unionville, Ontario L3R 2E5 Tel: 905-294-6282 Fax: 905-294-7623 www.harringtonmavan.com</p>	
<p>Project Name</p> <p>AAROC AGGREGATES PAYNE PIT</p> <p>LICENCE No. _____</p> <p>APPLICANT'S SIGNATURE _____</p> <p>PART LOTS 16 AND 17 CONCESSION 1 NTR MUNICIPALITY OF THAMES CENTRE (FORMERLY NORTH DORCHESTER), COUNTY OF MIDDLESEX</p>	
<p>Scale 1:2000</p> <p>North</p>	<p>Stamp</p> <p>PROFESSIONAL LANDSCAPE ARCHITECT ONTAIO MEMBER SINCE 2010</p>
<p>Drawing Status</p> <p>SUBMITTED TO MNRF FOR APPROVAL</p>	<p>Issue Date</p> <p>MAR 2021</p>
<p>Drawn SB</p> <p>Checked BJ</p>	<p>Project Number</p> <p>18-38</p>
<p>SECTIONS AND DETAILS</p>	
<p>Drawing Number</p> <p>4 OF 5</p>	



REHABILITATION NOTES

GENERAL INFORMATION

1. REFER TO SHEET 4 OF 5 FOR SECTIONS, SHEET 2 AND 3 OF 5 FOR OPERATIONS AND PHASING DIAGRAMS AND NOTES AND SHEET 5 OF 5 FOR FINAL REHABILITATION AND NOTES.
2. PROPERTY SHALL BE REHABILITATED TO:
- | | |
|-------------|---------|
| AGRICULTURE | 58.4 HA |
|-------------|---------|

HYDROGEOLOGICAL INFORMATION

3. IT IS ANTICIPATED THAT THE GROUNDWATER ELEVATION ACROSS THE SITE WILL REMAIN RELATIVELY UNCHANGED AT $\pm 285.5\text{m} - 289\text{m}$ A.S.L. (SEE JANUARY 2021 REPORT FROM GROUNDWATER SCIENCE CORP.).
4. ALL SURFACE DRAINAGE WILL BE DIRECTED TO THE INFILTRATION AREAS REMAINING ON THE

PIT FLOOR.

SIDESLOPE/MEADOW REHABILITATION INFORMATION

5. REHABILITATED SLOPES WITHIN THE LICENCED AREA WILL BE CONSTRUCTED AS SHOWN ON THE CROSS SECTIONS. REHABILITATION SHALL BE BY BACKFILLING (MINIMUM 3:1) AND/OR CUT AND FILL METHOD USING AVAILABLE ON-SITE OVERBURDEN AND TOPSOIL FROM WITHIN THE LICENCED AREA AND/OR CLEAN INERT IMPORTED FILL PER OPERATIONAL NOTE 20 ON PAGE 2.
- AVAILABLE OVERBURDEN REPLACED WILL BE APPROXIMATELY 100mm THICK.
- REFER TO DRAWING 4 OF 5, SECTIONS, FOR MORE INFORMATION ON BACKFILLING AND CREATION OF REHABILITATED SIDESLOPES.

TOP SECRET INFORMATION

6. ALL AVAILABLE TOPSOIL ON THE SITE WILL REMAIN TO BE USED FOR REHABILITATION OF THIS SITE.

7. TOPSOIL SHALL BE SEEDDED WITH A MIXTURE OF GRASSES AND LEGUMES THAT MAY INCLUDE THE FOLLOWING AT A RATE OF APPROXIMATELY 125KG/HA:

- BUCKWHEAT RED CLOVER WHITE CLOVER
TALL FESCUE ANNUAL RYE
- SETBACK REHABILITATION INFORMATION**
8. AFTER SIDESLOPES ARE CREATED AND REQUIRED BERMS ARE REMOVED FROM SETBACKS, THESE AREAS WILL BE IMMEDIATELY STABILIZED WITH A SUITABLE GROUND COVER AND THEN CULTIVATED THE FOLLOWING SPRING. THE EASTERN 15m SETBACK WILL BE LEFT TO NATURALIZE AFTER EXTRACTION IS COMPLETE.

REHABILITATING TO AGRICULTURAL FIELDS INFORMATION

9. REPAIRING OF FIELDS SHALL BE PERFORMED TO ELIMINATE COMPACTION (WHERE REQUIRED).
10. SPREADING OF AVAILABLE SUBSOIL/OVERBURDEN AND ROUGH GRADING.
11. SPREADING OF AVAILABLE TOPSOIL AND FINE GRADING.
12. REMOVAL OF STONES LARGER THAN 100mm.
13. SEED AREAS WITH SEED MIXTURE NOTED ABOVE. ALL VEGETATION PLANTED DURING THIS
14. MATERIAL FROM OTHER PROPERTIES (EG. MANURE AND/OR TOPSOIL) MAY BE IMPORTED INTO THE SITE FOR SOIL ENHANCEMENT USING STANDARD AGRICULTURAL PRACTICES.

[illegible]

Pre Licence Review Site Plan Amendments



Project Name	
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LICENCE No. -----
 APPLICANT'S SIGNATURE K. S. D.
 PART LOTS 16 AND 17 CONCESSION 1 NTR
 MUNICIPALITY OF THAMES CENTRE
 (FORMERLY NORTH DORCHESTER), COUNTY OF MIDDLESEX

Scale 1:2000	North	Stamp
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0 10 50 80m

Drawing Status

SUBMITTED TO MNRF
FOR APPROVAL





Drawn SB	Checked BJ	Issue Date MAR 2021
Drawing Title		Project Number

Drawing Title	Project Number
REHABILITATION	18-38

<h1>PLAN</h1>	Drawing Number
	5

5 OF 5

FILE NAME: 18-38\COMP\1838-5.DWG
PLOT DATE: MARCH 28 2020