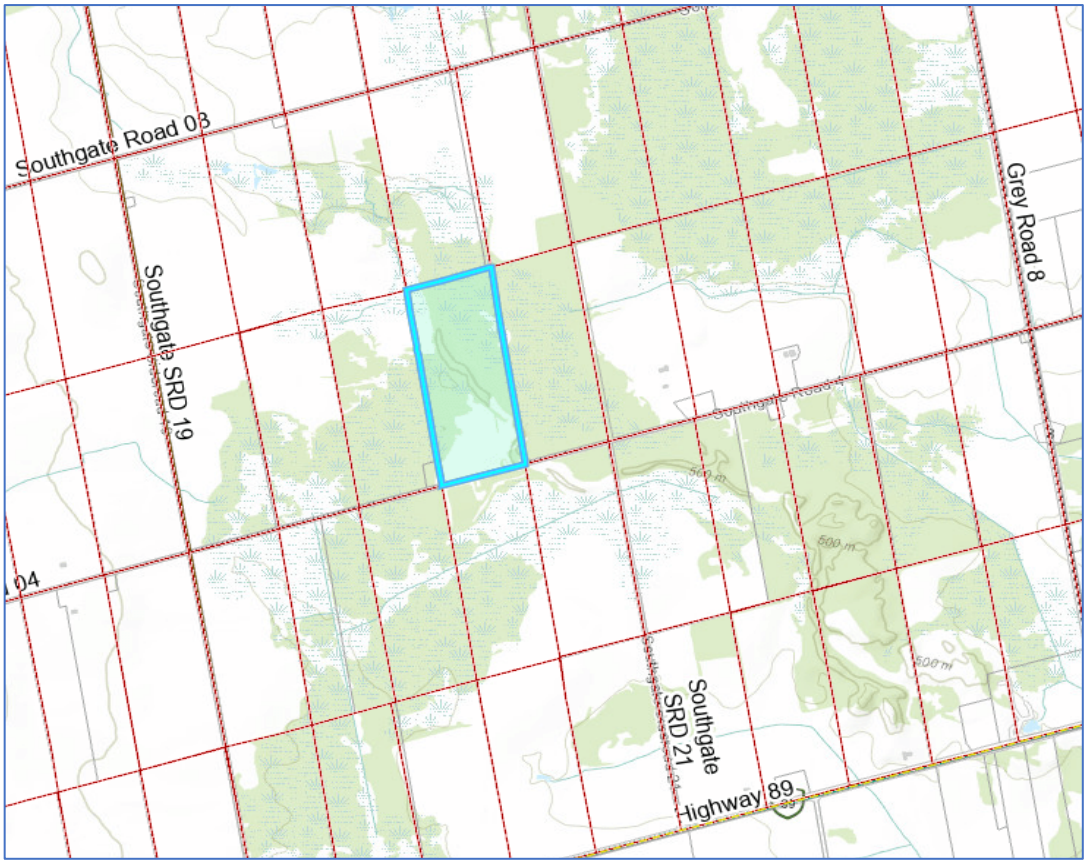

Summary Statement & Planning Analysis for a Class A License Application under the Aggregate Resources Act

Proposed Gravel Pit above the Maximum Predicted Water Table (Hog's Back Pit)

Part Lot 31, Concession 3
Former Township of Proton
Township of Southgate
County of Grey

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Urban and Rural Planning and Resource Management

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Referenced Materials

Aggregate Resources Act Site Plans, February 18, 2022, GSS Engineering Consultants Ltd.

Stage 1 and 2, Archaeological Assessment, October 30, 2019, Scarlett Janusas Archaeology Inc.

Natural Environmental Technical Report, February 23, 2022, Environmental Ltd.;

Hydrogeological Assessment Report, December 2021, prepared by GSS Engineering Consultants Ltd.;

Transportation Impact Study, March 2022, Paradigm Transportation Solutions Limited;

Physiography of Southern Ontario, 1984, Chapman and Putnam;

Ontario Geological Survey Aggregates Resources Inventory of Proton Township, 1981.

1.0 PREAMBLE

This Summary Statement & Planning Analysis forms part of the submission materials required for the above noted aggregate license application under the *Aggregate Resources Act* (ARA) and complete application requirements under the *Planning Act*. This application submission has been prepared on behalf of H Bye Construction Ltd. (applicant) which is applying for a Class 'A' license to extract aggregate above the maximum predicted water table at Part Lot 31, Concession 3, in the Township of Southgate, in the County of Grey (the parcel).

An application for a Class "A" license is required for any proposal to remove more than 20,000 tonnes of material annually from a site.

The complete license application consists of this Summary Statement and the following materials:

- **ARA Site Plans**, dated February 18, 2022, prepared by GSS Engineering Consultants Ltd. (GSS) including the following:
  Existing Features Plan
  Operational Plan
  Sections & Rehabilitation Plan;

- **Stage 1 and 2, Archaeological Assessment,** October 30, 2019, prepared by Scarlett Janusas Archaeology Inc. and approved by the Ministry of Heritage Tourism, Culture and Sport Industries (MTCS) on November 12, 2019 (see Appendix A to this Summary Statement);

- **Natural Environmental Technical Report** (NETR) dated February 23, 2022, prepared by SAAR Environmental Ltd. (SAAR);

- **Hydrogeological Assessment Report**, dated December 2021, prepared by GSS;

- **Professional Qualifications** (authors of Technical Reports and ARA Site Plans) (Appendix B to the Summary Statement);

- **License Application Form** and Fee as well as the Deed for the subject lands.

The Summary Statement (Statement) and associated Technical Reports have been prepared by the various authors in accordance with the *Aggregate Resources of Ontario: Technical Reports and Information Standards*, dated August 2020 (Provincial Standards). The ARA Site Plans have been prepared by GSS in accordance with the *Aggregate Resources of Ontario: Site Plan Standards*, dated August 2020 (Provincial Standards).

The Provincial Standards and associated requirements reflect the relevant matters of provincial interest as outlined in Section 12 (1) of the *Aggregate Resources Act* (ARA) and Section 2 of the *Planning Act* for which all license applications shall have regard.

The subject proposal's consistency with the applicable Provincial Standards and other relevant legislative requirements will be summarized in this Statement via a synopsis of the technical reports, potential impacts and proposed mitigation. In addition, this Statement will provide an overview of existing conditions at and near the site, proposed operations, including progressive rehabilitation, and the plans for final rehabilitation of the site.

Unless otherwise noted within this Statement, references stem from the ARA Site Plans, Site Plan Notes (notes) and the Technical Reports associated with the proposal.

Planning Act approvals will also form a requirement of the subject license application. Upper-tier (Grey County) and lower-tier (Township of Southgate) official plan amendment(s) and a zoning by-law amendment are necessary to permit the new mineral extraction use. A Planning Analysis of the relevant upper and lower tier official plan policies has been included as part of this Statement. In addition to the materials required under the ARA, the *Planning Act* complete application requirements included the need for a **Transportation Impact Study** (TIS). The TIS, dated March 2022, prepared by Paradigm Transportation Solutions Limited (Paradigm) has been submitted as part of the *Planning Act* complete application requirements to the County of Grey and Township of Southgate.

1.1 Project Overview

1.1.1 Proposed Operations (the Site *(Figure 1)*)

The Hog's Back Pit will be a Class 'A,' pit with a proposed annual tonnage of 100,000 tonnes. The applicant proposes to license 13.38 hectares of which 5.77 hectares is slated for extraction.

Area and Depth of Extraction

Extraction is to occur to a depth of 1.5 metres (m) above the maximum predicted water table. The pit bottom elevations were determined via high water table elevations identified at the Site and inferred water table contours across the Site. The bottom elevations vary from 495.00 metres above sea level (masl) at the south end of the Site to 491.5 masl at

the north end of the Site. Depth of extraction from the top of the deposit will range from 6 m to 11 m across the Site. As noted above, the area of extraction is 5.77 hectares.

Site Preparation and Phasing

Extraction will proceed south to north with the internal haul road extended along the floor of the pit. Extraction will occur in three (3) phases across the Site and in one (1) lift with a maximum lift height of 11 m.

In each phase, the limits of extraction will be surveyed and clearly marked/staked at a minimum of 50-metre intervals and at a minimum of 100 m in advance of topsoil stripping and excavation. Stakes are to be maintained until the resource in that portion of the Site is exhausted and progressive rehabilitation commenced.

Topsoil and overburden will be stripped separately and where not used immediately for rehabilitation purposes, stored in temporary berms or stockpiles as identified on the Operational Plan and its notes. Temporarily stored soils will be seeded to prevent erosion.

Trees and stumps removed as part of operations will remain on site to decompose naturally or mulched for rehabilitation purposes.

Runoff will be directed to shallow swales on the east and west margins of stripped areas and then directed southerly to the pit floor to infiltrate to avoid flow into the adjacent Provincially Significant Wetlands (PSWs).

Operations & Site Details

Operations will take place Monday to Friday from 7 am to 6 pm with no operations on weekends or public holidays.

Processing operations will generally follow extraction and be relocated as necessary throughout the lifespan of the pit and as rehabilitation proceeds. A reduction from 30 m to 15 m for the purposes of stockpiling or location of a structure has been requested at the south/southwest end of the Site. It is anticipated that stockpiling at this location will occur in Phase 1 of operations only. A licensed area setback of approximately 120m from the municipal roadway will be maintained.

Equipment used on the Site will include loaders, bulldozers, excavators, conveyors, dump trucks as well as portable crushing and screening equipment. While some blending of imported material with the on-site aggregate is anticipated, importation of other materials for blending purposes will not be significant. No washing of material will take place at the Site.

Re-fueling of equipment will occur primarily via fuel trucks attending on the Site. A Spills Contingency Plan included in the Operational Plan notes provides direction to the pit operator in the instance of a fuel spill.

The Site will be fenced and gated in accordance with the Provincial Standards save and except for a request to exclude fencing adjacent to or within the adjacent PSWs.

The existing entrance at Southgate Road 4, established as part of the former wayside pit operation, will continue to be used. The Township of Southgate may require entrance upgrades and a new entrance permit as part of the approval process.

Recommendations and Monitoring Programs from the Technical Reports have been included on the ARA Site Plans and notes and described later in this Statement.

1.1.2 Haulage Route

The main haulage route proposed for the operation is east on Southgate Road 4 to Grey Road 8 (2.5 km±) and then south to Provincial Highway 89 (2 km±).

It is intended to use tri-axle single unit trucks which typically haul ±40 tonnes per load.

As noted previously, as part of the *Planning Act* complete application requirements, the Township of Southgate required the completion of a Traffic Impact Study (TIS) and any recommendations stemming from the TIS be implemented via a haul route agreement between the applicant and the Township of Southgate.

Paradigm Transportation Solutions Limited (Paradigm) was retained by the applicant to complete the required TIS. The TIS included an assessment of the current traffic and site conditions along the proposed haulage route and provided estimates of background traffic growth as well as estimates of additional traffic generated by the new gravel pit use. Turning movement counts at the study area intersections were undertaken by Paradigm in March 2022. An impact analysis of future traffic on the surrounding road network using traffic forecasts under full capacity operations (2022) and a five-year horizon (2027) was completed. The study assumed 240 operating days per year and an 11-hour working day. During AM and PM peak hours, the TIS has forecasted approximately 12 inbound and 12 outbound truck trips.

Under current and forecasted conditions (2027) the study area intersections are predicted to operate within acceptable levels of service with no problem movements during AM and PM peak hours. The additional traffic generated from the pit increases the overall delay at the study area intersections by one second or less during peak times. The intersections at Highway 89 at Grey Road 8 and Southgate Road 4 at Grey Road 8 were also assessed to determine if left-turn lanes were warranted. The TIS

determined that no off-site transportation improvements are required as part of the proposal.

1.1.3 Progressive and Final Rehabilitation Plan *(Figure 2)*

As noted in Section 1.1.1, rehabilitation will be progressive and closely follow phases of extraction.

Slopes at the north and south ends of extraction shall be rehabilitated as the limits of extraction are reached. Final perimeter slopes, created from stored overburden, shall be graded to a 3:1 slope and immediately topsoiled and seeded for stabilization. Overburden followed by topsoil shall be spread uniformly on the pit floor with reforestation of the rehabilitated section occurring the following spring season.

The southern portion of the Site will be rehabilitated to a natural state for the purposes of a passive recreational after use. The internal haul route will remain unrehabilitated in this southern section to provide future access to the recreational area. Native grasses and forb species shall be used for planting in the southern area to avoid invasive species.

The northern portion of the Site will be reforested to create a wildlife corridor/linkage between the east and west PSWs. The corridor shall extend a minimum of 200 m from the northern property line.

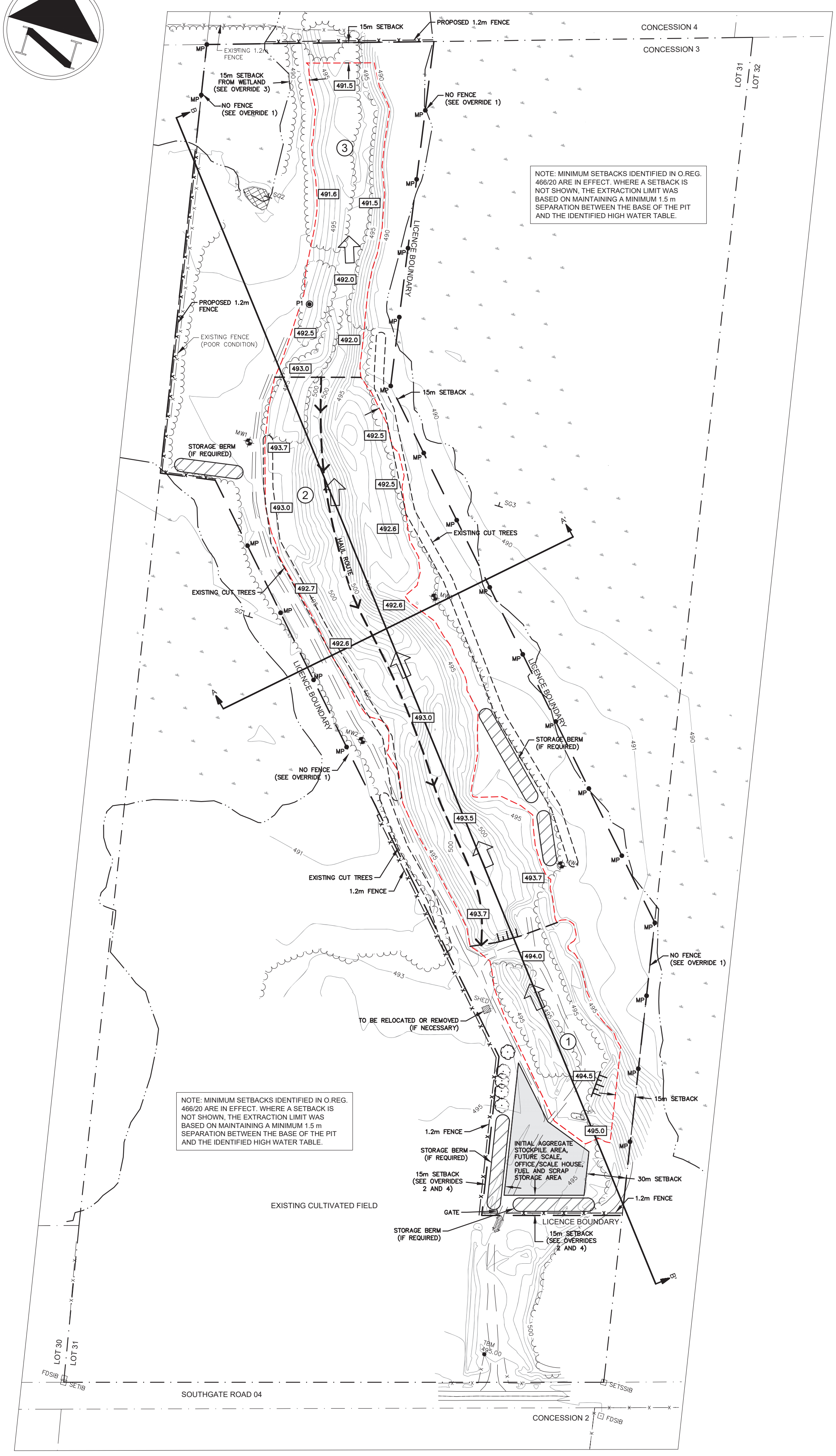
Areas to be reforested in the north and supplemented to the east (along margins of the east PSW) shall be planted with suitable native flora which also incorporates First Nations traditional flora. Tree and shrub species will include red-osier dogwood, pincherry, iron wood, white cedar, basswood, white elm and trembling aspen. In this portion of the Site, the haul route will be rehabilitated in a north-south direction to the southern limit of the wildlife corridor.

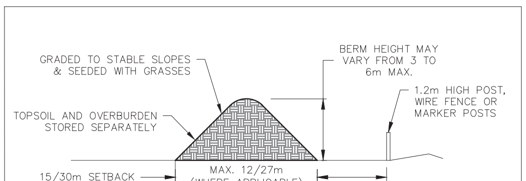
The wetland meadow in the northwest portion of the Site will be enhanced with the following native plantings: smooth sawgrass, common rush, poverty oak grass, swamp goldenrod, joe-pye-weed white aster, harebull, yarrow, swamp milkweed along with green and panicled bullrush. The meadow rehabilitation will follow the bolstering of the east PSW limits. The meadow plantings will also support various bird and insect species, particularly the monarch butterfly.

Vegetation will continue to be monitored for a minimum of two (2) growing seasons with plantings replaced as necessary by the operator.

Ultimately, the rehabilitation plan will result in a net gain of biodiversity at the Site with a planting area of 0.75 ha in addition to the 5.77 ha being extracted.

Once the license is surrendered, a potential future campground at the Site will be subject to additional *Planning Act* applications to permit a recreational use on the lands.





TYPICAL BERM SECTION – N.T.S.

SEQUENCE OF OPERATION AND PROGRESSIVE REHABILITATION

1. PRIOR TO ANY ON-SITE OPERATIONS, CONSTRUCT OR UPGRADE THE FENCING ON THE BOUNDARIES OF THE LICENSED AREA TO THE STANDARDS OF THE AGGREGATE RESOURCES ACT (1.2 m HIGH POST AND WIRE FENCE), EXCEPT WHERE SITE PLAN OVERRIDES ARE NOTED. INSTALL A SUITABLE GATE AT THE ENTRANCE TO THE SITE ON THE SOUTH LICENCE BOUNDARY. WHERE FENCING IS NOT ERECTED, LICENCE BOUNDARIES SHALL BE DELINEATED WITH HIGHLY VISIBLE MARKER POSTS. ALL FENCING AND MARKERS SHALL BE MAINTAINED.
2. IDENTIFY LIMITS OF EXTRACTION FOR PHASE I AND THE SOUTH PORTION OF PHASE 2 BY SURVEY BASED ON THE MINIMUM PIT FLOOR ELEVATIONS SHOWN ON THIS PLAN. LIMITS OF EXTRACTION TO BE MARKED WITH STAKES DRIVEN SECURELY INTO THE GROUND AND PAINTED OR MARKED TO BE HIGHLY VISIBLE, AT A MINIMUM SEPARATION DISTANCE OF 50 m. EXTRACTION LIMITS TO BE IDENTIFIED AND STAKED FOR A MINIMUM OF 100 m IN ADVANCE OF STRIPPING AND EXCAVATING OPERATIONS. STAKES TO BE MAINTAINED UNTIL EXTRACTION IN THAT AREA HAS BEEN COMPLETED AND REHABILITATION HAS BEEN INITIATED.
3. STRIPPING AND EXTRACTION TO START AT THE SOUTH END OF PHASE 1 AND PROCEED IN A NORTHERLY DIRECTION. DURING EXTRACTION IN PHASE 1, AGGREGATE WILL BE STOCKPILED IN THE AREA AT THE SOUTH END OF THE SITE AS SHOWN ON THIS PLAN.
4. PRIOR TO EXTRACTION, STRIP TOPSOIL AND OVERBURDEN SEPARATELY AND PLACE THE MATERIAL IN STORAGE BERMS AT THE APPROXIMATE LOCATIONS SHOWN.
5. A SCALE AND OFFICE/SCALE HOUSE MUST BE CONSTRUCTED IN THE AREA SHOWN AT THE SOUTH END OF THE SITE, IF AND/OR WHEN NEEDED.
6. EXTRACTION AT THE SOUTH END OF PHASE 2 WILL PROCEED IN A NORTHERLY DIRECTION, WITH EXTRACTION LIMITS TO BE IDENTIFIED AND STAKED FOR A MINIMUM OF 100 m IN ADVANCE OF STRIPPING AND EXCAVATING OPERATIONS. PHASE 1 TO BE COMPLETED AND PROGRESSIVELY REHABILITATED BEFORE EXTRACTION IN PHASE 2 IS COMPLETE.
7. EXTRACTION AT THE SOUTH END OF PHASE 3 WILL PROCEED IN A NORTHERLY DIRECTION, WITH EXTRACTION LIMITS TO BE IDENTIFIED AND STAKED FOR A MINIMUM OF 100 m IN ADVANCE OF STRIPPING AND EXCAVATING OPERATIONS. PHASE 2 TO BE COMPLETED AND PROGRESSIVELY REHABILITATED BEFORE EXTRACTION IN PHASE 3 IS COMPLETE, WITH THE EXCEPTION OF THE HAUL ROUTE WHICH SHALL BE MAINTAINED UNTIL EXTRACTION AND REHABILITATION IN PHASE 3 IS COMPLETE.

OPERATIONAL NOTES

1. **SEQUENCE AND DIRECTION:** OPERATIONS IN THE PIT WILL GENERALLY PROCEED FROM SOUTH TO NORTH, IN ACCORDANCE WITH THE DIRECTIONAL ARROWS SHOWN ON THIS PLAN. EXTRACTION, STRIPPING AND REHABILITATION AREAS SHOWN ARE SCHEMATIC AND MAY VARY. THE PIT SHALL BE OPERATED IN THREE PHASES. PHASES DO NOT REPRESENT ANY SPECIFIC OR EQUAL TIME PERIOD. REHABILITATION WILL BE PROGRESSIVE AND SHALL PROCEED AS OUTLINED BELOW. AS THE LIMIT OF EXTRACTION IS REACHED IN ANY PARTICULAR AREA, THAT AREA SHALL BE REHABILITATED AS OUTLINED IN THE REHABILITATION PLAN (DRAWING 3). THE PROCESSING AREA MAY BE RELOCATED AS REQUIRED AND WILL GENERALLY FOLLOW EXTRACTION. NOTWITHSTANDING THE OPERATIONAL AND REHABILITATION NOTES, DEMAND FOR CERTAIN PRODUCTS OR BLENDING OF MATERIALS MAY REQUIRE MINOR DEVIATIONS IN THE EXTRACTION AND REHABILITATION SEQUENCE. ANY MAJOR DEVIATIONS SHALL REQUIRE APPROVAL IN WRITING FROM MNRF.
2. **TOPSOIL, SUBSOIL AND OVERBURDEN STRIPPING AND STOCKPILING:** AREAS WITHIN THE LIMIT OF EXTRACTION WILL BE STRIPPED OF TOPSOIL, SUBSOIL AND/OR OVERBURDEN IN STAGES, IN ACCORDANCE WITH THE SEQUENCE OF OPERATIONS. TOPSOIL, SUBSOIL AND OVERBURDEN SHALL BE SEPARATELY STRIPPED AND EITHER USED IMMEDIATELY FOR PROGRESSIVE REHABILITATION OR TEMPORARILY STORED IN BERMS AND/OR STOCKPILES. WHERE THERE ARE DISTINGUISHABLE LAYERS AND SUFFICIENT THICKNESS TO ALLOW IT, TOPSOIL AND SUBSOIL WILL BE STRIPPED AND STORED SEPARATELY AND REPLACED ON THE PIT FLOOR AND END SLOPES DURING SITE REHABILITATION IN A SIMILAR MANNER. NO TOPSOIL SHALL BE REMOVED FROM THE SITE.
3. **TOPSOIL/OVERBURDEN STORAGE:** ALL TOPSOIL AND OVERBURDEN NOT BEING USED IMMEDIATELY FOR PROGRESSIVE REHABILITATION SHALL BE STORED IN BERMS WHERE SHOWN, OR ON THE PIT FLOOR IN STOCKPILES. STOCKPILES SHALL NOT BE LOCATED WITHIN 30 m OF ANY LICENCE BOUNDARY EXCEPT IN THE FORM OF BERMS. ALL TOPSOIL, SUBSOIL AND OVERBURDEN STOCKPILES SHALL BE A MAXIMUM OF 6 m IN HEIGHT, GRADED TO STABLE SLOPES AND SEEDED WITH A SUITABLE GRASS/LEGUME MIXTURE TO PREVENT EROSION. BERMS SHALL BE CONSTRUCTED AND MAINTAINED AS SHOWN IN THE BERM DETAIL. REFER TO NOTE E5 UNDER TECHNICAL RECOMMENDATIONS FOR REMOVAL OF STOCKPILES IN PLACE FOR LONGER THAN 90 DAYS.
4. **LIFTS:** EXTRACTION WILL OCCUR IN ONE (1) LIFT, WITH A MAXIMUM ESTIMATED LIFT HEIGHT OF 11 m, AND SHALL BE CARRIED OUT IN ACCORDANCE WITH MINISTRY OF LABOUR REQUIREMENTS.
5. **HAUL ROADS:** AN INTERNAL HAUL ROAD SHALL BE ESTABLISHED ON THE PIT FLOOR IN PHASES 2 AND 3 AS SHOWN APPROXIMATELY ON THIS PLAN AND SHALL BE MAINTAINED UNTIL EXTRACTION AT THE NORTH END OF THE PIT IS COMPLETED. THE EXISTING ACCESS TRAIL LOCATED WEST OF THE EXTRACTION AREA SHALL NOT BE USED FOR PIT OPERATIONS IN THE AREA NORTH OF THE FORMER WAYSIDE PIT (PHASE 1).
6. **ENTRANCE/EXIT/GATE:** THERE WILL BE ONE ENTRANCE/EXIT TO THE PIT LOCATED ON THE SOUTH LICENCE BOUNDARY, AS SHOWN, USING THE EXISTING ACCESS ROAD FROM SOUTHGATE ROAD 04. A GATE, WITH A MINIMUM HEIGHT OF 1.2 m, SHALL BE INSTALLED AND MAINTAINED AT THE SITE ENTRANCE/EXIT. THE GATE SHALL BE CLOSED WHEN THE PIT IS NOT IN OPERATION.
7. **AREA OF EXTRACTION:** THE IDENTIFIED AREA TO BE EXCAVATED IS 5.77 HECTARES. THE LICENSED AREA IS 13.38 HA.
8. **GROUNDWATER TABLE:** THE SEASONAL HIGH WATER TABLE ELEVATION AT THE SITE WAS IDENTIFIED IN THE HYDROGEOLOGICAL ASSESSMENT REPORT PREPARED BY GSS ENGINEERING CONSULTANTS LTD. (DECEMBER 2021) AND VARIED FROM 492.2 TO 490.1 m.
9. **SURFACE DRAINAGE:** SURFACE DRAINAGE FROM OPERATIONAL AREAS SHALL BE BY INFILTRATION INTO THE PIT FLOOR. NO SURFACE RUNOFF FROM OPERATIONAL AREAS SHALL BE DIRECTED TO, OR ALLOWED TO FLOW TO, THE WETLANDS LOCATED EAST AND WEST OF THE PIT. TO REDUCE THE POTENTIAL FOR SURFACE RUNOFF TO THE ADJACENT WETLANDS FROM AREAS THAT HAVE BEEN STRIPPED, STRIPPING SHALL OCCUR NO MORE THAN 150 m IN ADVANCE OF THE WORKING FACE. SHALLOW SWALES SHALL BE CONSTRUCTED AT THE EAST AND WEST MARGINS OF THE STRIPPED AREA TO DIRECT EXCESS RUNOFF IN A SOUTHERLY DIRECTION TOWARD THE AREA OF EXTRACTION, WHERE IT WILL INFILTRATE INTO THE PIT FLOOR. AS REHABILITATION IS COMPLETED, THE SITE SHALL BE GRADED AS SHOWN ON DRAWING 3. NO OFF-SITE RUNOFF SHALL OCCUR UNTIL ADEQUATE VEGETATIVE COVER HAS BEEN ESTABLISHED.
10. **FENCING:** POST AND WIRE FENCING (MINIMUM HEIGHT 1.2 m) SHALL BE INSTALLED AND MAINTAINED ALONG THE NORTH, SOUTH, NORTHWEST, AND SOUTHWEST LICENCE BOUNDARIES, AS SHOWN ON THIS PLAN. NO FENCING IS PROPOSED FOR THE EAST AND WEST LICENCE BOUNDARIES ADJACENT TO THE WETLANDS (SEE OVERRIDE 1). ALL UNFENCED LICENSED BOUNDARIES SHALL BE DELINEATED WITH HIGHLY VISIBLE MARKER POSTS (MINIMUM HEIGHT 1.2 m) AT EACH CORNER OR OTHER CHANGE IN ALIGNMENT AND WITH A MINIMUM SPACING OF 60 m ALONG THE UNFENCED BOUNDARIES. REQUIRED FENCING AND MARKERS SHALL BE ERECTED PRIOR TO THE START OF ON-SITE EXCAVATION.
11. **PROPOSED BUILDINGS AND STRUCTURES:** IF AND/OR WHEN NEEDED, AN OFFICE/SCALE HOUSE AND SCALE WILL BE ERECTED AT THE SOUTH END OF THE SITE IN THE AREA SHOWN (SEE OVERRIDE 2 FOR PLACEMENT OF SCALE AND/OR OFFICE/SCALE HOUSE). FROM TIME TO TIME, OFFICE TRAILERS MAY BE BROUGHT ONTO THE SITE FOR THE USE OF WORKERS DURING OPERATIONAL HOURS. THESE PORTABLE STRUCTURES WILL BE LOCATED AS REQUIRED BY SITE OPERATIONS.
12. **SETBACKS:** EXCAVATION SETBACKS SHALL BE A MINIMUM OF 15 m ALONG ALL LICENCE BOUNDARIES, EXCEPT AS NOTED FOR WETLANDS LOCATED EAST AND WEST OF THE EXTRACTION AREA. MINIMUM SETBACKS FOR AGGREGATE ACTIVITY FROM THE IDENTIFIED WETLAND BOUNDARIES RANGE FROM 15 TO 30 m, DEPENDING ON: A) ADJACENT ECOLOGY FEATURES AND FUNCTIONS AND (B) OPPORTUNITY TO MAXIMIZE SETBACKS. SEE NOTE E6 UNDER TECHNICAL RECOMMENDATIONS AND OVERRIDE 3.
13. **EXTRACTION DEPTH:** TO MAINTAIN A MINIMUM 1.5 m SEPARATION DISTANCE ABOVE THE IDENTIFIED HIGH WATER TABLE, THE MAXIMUM DEPTH OF EXTRACTION SHALL BE TO ELEVATIONS RANGING FROM 495.0 m AT THE SOUTH END OF THE PIT TO 491.5 m AT THE NORTH END, AS SHOWN ON THIS PLAN. EXTRACTION WILL OCCUR IN ONE LIFT.
14. **SIDESLOPES:** FINAL PERIMETER SIDESLOPES SHALL BE NO STEEPER THAN 3 (HORIZONTAL) TO 1 (VERTICAL). FINAL SLOPES SHALL BE COVERED WITH A MINIMUM OF 0.15 m OF TOPSOIL AND SHALL BE SEEDED WITH A SUITABLE MIXTURE OF NATIVE GRASS AND FORB SPECIES THAT AVOIDS INVASIVE SPECIES.
15. **VEGETATION:** VEGETATION SHALL BE MAINTAINED ON ALL TOPSOIL BERMS AND STOCKPILES AND REHABILITATED AREAS. ANY VEGETATION THAT DIES OR IS DAMAGED SHALL BE RESEEDED OR REPLANTED.
16. **AGGREGATE STOCKPILES:** AGGREGATE MATERIAL WILL BE STOCKPILED ON THE PIT FLOOR ADJACENT TO THE PROCESSING AREA. AGGREGATE STOCKPILES SHALL BE A MAXIMUM OF 15 m IN HEIGHT. NO STOCKPILES SHALL BE LOCATED WITHIN 30 m OF THE LICENCE BOUNDARY, EXCEPT UNDER THE FOLLOWING CIRCUMSTANCES: DURING INITIAL EXTRACTION IN PHASE 1 AGGREGATE STOCKPILES MAY BE PLACED TO WITHIN 15 m OF THE WEST AND SOUTHWEST LICENCE BOUNDARIES IN THE AREA SHOWN AT THE SOUTH END OF THE SITE (SEE OVERRIDE 2). REFER TO NOTE E5 UNDER TECHNICAL RECOMMENDATIONS FOR REMOVAL OF STOCKPILES IN PLACE FOR LONGER THAN 90 DAYS.
17. **RECYCLED MATERIAL:** NO RECYCLABLE MATERIAL SHALL BE STOCKPILED OR STORED ON SITE.
18. **TEMPORARY SCRAP STORAGE:** ALL SCRAP MATERIAL GENERATED DIRECTLY AS A RESULT OF THE ON-SITE AGGREGATE OPERATION SHALL BE COLLECTED AND TEMPORARILY STORED AT A DESIGNATED LOCATION AT THE SOUTH END OF THE SITE, AS SHOWN ON THIS PLAN. SCRAP MATERIAL SHALL BE REMOVED FROM THE SITE ON AN ONGOING BASIS. NO SCRAP MATERIAL SHALL BE STORED WITHIN 30 m OF THE EAST LICENCE BOUNDARY AND 15 m OF THE SOUTH AND SOUTHWEST LICENSE BOUNDARIES (SEE OVERRIDE 4).
19. **FUEL STORAGE:** ALL FUEL AND ASSOCIATED PRODUCTS SHALL BE STORED IN ABOVEGROUND TANKS OR CONTAINERS IN COMPLIANCE WITH THE TECHNICAL STANDARDS AND SAFETY ACT (2000), LIQUID FUELS REGULATION O.REG. 217/01, AND LIQUID FUELS HANDLING CODE (2000), AS APPLICABLE, AT THE LOCATION SHOWN ON THIS PLAN. FUEL TRUCKS MAY BE USED FOR ON-SITE REFUELLING OF EQUIPMENT WITHIN THE PIT. ANY SPILLS OR RELEASES OF FUEL OR ASSOCIATED PRODUCTS SHALL BE MANAGED IN ACCORDANCE WITH THE SPILL CONTINGENCY PLAN DESCRIBED ON THIS PLAN.
20. **PROCESSING AREAS:** PROCESSING EQUIPMENT SHALL BE LOCATED ON THE PIT FLOOR AND SHALL BE RELOCATED AS NECESSARY BASED ON THE SEQUENCE OF OPERATIONS. NO PROCESSING PLANT OR AREAS SHALL BE LOCATED WITHIN 30 m OF THE LICENCE BOUNDARY. THE LICENSEE ACKNOWLEDGES AND AGREES THAT THERE SHALL BE NO TEMPORARY OR PERMANENT ASPHALT OR READY-MIX CONCRETE PLANTS ON THE SITE.
21. **EQUIPMENT AND METHOD OF EXTRACTION:** MAIN EQUIPMENT ON SITE MAY INCLUDE, BUT IS NOT LIMITED TO, LOADERS, BULLDOZERS, DUMP TRUCKS, PORTABLE CRUSHING EQUIPMENT, PORTABLE SCREENING EQUIPMENT, EXCAVATORS, CONVEYORS, AND SERVICE VEHICLES FOR GENERAL OPERATIONS AND MAINTENANCE. EXTRACTION WILL BE CARRIED OUT IN ONE LIFT, USING LOADERS OPERATING FROM THE BASE OF THE PIT. EXTRACTION WILL PROCEED NORTHERLY FROM THE SOUTH END, STARTING AT EXISTING ELEV. 495.0m. THE BASE OF THE PIT WILL BE MAINTAINED AT THE PIT BOTTOM ELEVATIONS SHOWN ON THIS PLAN, AND THOSE ELEVATIONS WILL DEFINE THE LATERAL LIMITS OF EXTRACTION.
22. **DUST CONTROL:** DUST CONTROL SHALL BE MAINTAINED THROUGH THE APPLICATION OF WATER OR OTHER MECP-APPROVED DUST SUPPRESSANTS. DUST SHALL BE MITIGATED ON SITE.
23. **NOISE, DUST OR GROUNDWATER INTERFERENCE PROBLEMS:** SHOULD NOISE, DUST OR GROUNDWATER INTERFERENCE COMPLAINTS BE RECEIVED, THE LICENSEE SHALL TAKE APPROPRIATE MEASURES AS DEEMED NECESSARY BY THE MECP TO RECTIFY THE PROBLEM.
24. **DEWATERING/WASHING:** NO DEWATERING OR WASHING OF AGGREGATE SHALL TAKE PLACE ON THIS SITE.
25. **TONNAGE CONDITION:** THE MAXIMUM AMOUNT OF AGGREGATE TO BE REMOVED FROM THIS SITE IN ANY CALENDAR YEAR IS 100,000 TONNES.
26. **HOURS OF OPERATION:** OPERATIONS WILL TAKE PLACE BETWEEN 7 A.M. AND 6 P.M. MONDAY TO FRIDAY. THERE SHALL BE NO OPERATIONS ON SATURDAYS OR SUNDAYS, OR PUBLIC HOLIDAYS AS DEFINED IN ACCORDANCE WITH THE EMPLOYMENT STANDARDS ACT. OPERATIONS OUTSIDE THESE HOURS MAY OCCUR IN RESPONSE TO AN EMERGENCY AND WITH NOTIFICATION TO THE TOWNSHIP.
27. **TREE AND STUMP REMOVAL:** FOR TREES AND STUMPS REMOVED AS PART OF THE OPERATION OF THIS SITE, TIMBER RESOURCES (IF ANY) WILL BE SALVAGED FOR USE AS SAW LOGS, FENCE POSTS, AND/OR FUEL WOOD, WHERE APPROPRIATE. STUMPS AND BRUSH CLEARED DURING SITE PREPARATION SHALL BE PLACED AT AN APPROPRIATE LOCATION ON THE SITE TO DECOMPOSE NATURALLY AND/OR GROUND INTO MULCH FOR USE IN THE PROGRESSIVE REHABILITATION OF THE SITE. EXISTING FELLED TREES PREVIOUSLY PLACED ALONG THE EAST AND WEST MARGINS OF THE SITE MAY BE LEFT TO DECOMPOSE NATURALLY OR MAY BE MOVED OR PROCESSED ELSEWHERE ON SITE, PROVIDED THAT IT IS DONE IN THE WINTER (DECEMBER TO MARCH).
28. **IMPORTATION OF INERT FILL:** CLEAN INERT FILL CONSISTING OF TOPSOIL FROM LOCAL AGRICULTURAL SITES MAY BE IMPORTED TO FACILITATE PIT REHABILITATION. ONLY SUFFICIENT MATERIAL TO CREATE A FINAL COVER UP TO 0.3 m THICK MAY BE IMPORTED. THE VOLUME OF IMPORTED TOPSOIL SHALL NOT EXCEED 8,700 CUBIC METRES. THE LICENSEE MUST ENSURE THAT THE MATERIAL IS TESTED AT THE SOURCE IN ACCORDANCE WITH O.REG. 406/19 FOR EXCESS SOIL MANAGEMENT BEFORE IT IS DEPOSITED ON THE SITE. THE TESTING MUST CONFIRM THAT THE MATERIAL MEETS THE MECP TABLE 1 STANDARDS AS SET OUT IN THE MECP "SOIL, GROUND WATER AND SEDIMENT STANDARDS FOR USE UNDER PART XV.1 OF THE ENVIRONMENTAL PROTECTION ACT". TESTING RESULTS FOR IMPORTED MATERIALS SHALL BE RETAINED AND PROVIDED TO THE MECP AND/OR MNRF UPON REQUEST.

IMPORTATION OF AGGREGATE MATERIAL FOR BLENDING WITH ON-SITE AGGREGATE MATERIAL

FROM TIME TO TIME, THE LICENSEE MAY IMPORT AGGREGATE FROM ANOTHER LICENSED PIT FOR BLENDING WITH ON-SITE AGGREGATE. THIS WOULD TYPICALLY CONSIST OF THE BLENDING OF FINER-GRAINED AGGREGATE FROM ANOTHER SITE WITH COARSER-GRAINED AGGREGATE FROM THIS SITE. ALL IMPORTED AGGREGATE SHALL BE USED SOLELY FOR THE PURPOSE OF BLENDING WITH ON-SITE MATERIAL FOR RESALE. IMPORTED AGGREGATE SHALL BE TEMPORARILY STOCKPILED WITHIN THE OPERATIONS AREA OF THE PIT.

A SEPARATE DAILY RECORD SHALL BE MAINTAINED OF THE QUANTITY OF AGGREGATE MATERIAL IMPORTED TO THE SITE FOR BLENDING WITH ON-SITE AGGREGATE.

THE QUANTITY OF IMPORTED AGGREGATE REMOVED FROM THE SITE EACH YEAR SHALL COUNT TOWARD THE TOTAL AMOUNT OF AGGREGATE THAT THE LICENSEE IS ENTITLED TO REMOVE FROM THE SITE UNDER THE LICENCE.

SITE PLAN OVERRIDES OF THE CONTROL AND OPERATION STANDARDS IDENTIFIED IN O.REG. 466/20, AMENDING O.REG. 244/97

1. **SECTION 0.13 (3):** NO FENCING SHALL BE CONSTRUCTED ALONG THE EAST AND WEST LICENCE BOUNDARIES IN THE AREAS ADJACENT TO OR WITHIN EXISTING WETLANDS AS IDENTIFIED IN THE NATURAL ENVIRONMENT TECHNICAL REPORT AND SHOWN ON THIS PLAN. IN THOSE UNFENCED AREAS, THE LICENCE BOUNDARY SHALL BE DEMARCATED WITH HIGHLY VISIBLE MARKER POSTS (MINIMUM HEIGHT 1.2 m) PLACED AT EACH CHANGE IN ALIGNMENT AND WITH A MINIMUM SPACING OF 60 m ALONG THE BOUNDARY.
2. **SECTION 0.13 (1) RULE 13:** THE SETBACK ADJACENT TO THE SOUTH AND SOUTHWEST LICENCE BOUNDARIES HAS BEEN REDUCED FROM 30 m TO 15 m FOR THE PURPOSE OF STOCKPILING AGGREGATE AND/OR LOCATING A BUILDING OR STRUCTURE (I.E., A SCALE AND/OR OFFICE/SCALE HOUSE) IN THE AREA SHOWN AT THE SOUTH END OF THE SITE. THE LICENSEE OWNS THE ADJACENT LANDS TO THE SOUTH AND WEST.
3. **SECTION 0.13 (1) RULE 10 (iii):** THE SETBACK FROM THE IDENTIFIED WETLAND LOCATED WEST OF THE NORTH END OF THE EXTRACTION AREA HAS BEEN REDUCED FROM 30 m TO 15 m. REFER TO NOTE E6 UNDER TECHNICAL RECOMMENDATIONS.
4. **SECTION 0.13 (1) RULE 25:** THE SETBACK ADJACENT TO THE SOUTH AND SOUTHWEST LICENCE BOUNDARIES HAS BEEN REDUCED FROM 30 m TO 15 m FOR THE PURPOSE OF TEMPORARY SCRAP STORAGE IN THE AREA SHOWN AT THE SOUTH END OF THE SITE. THE LICENSEE OWNS THE ADJACENT LANDS TO THE SOUTH AND WEST.

SPILL CONTINGENCY PLAN

IN THE EVENT OF AN INADVERTENT RELEASE OF PETROLEUM PRODUCTS OR OTHER HAZARDOUS LIQUIDS TO THE NATURAL ENVIRONMENT, THE FOLLOWING CONTINGENCY PLAN SHALL BE FOLLOWED.

1. NOTIFY THE MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS (MECP) SPILLS ACTION CENTRE (SAC) BY TELEPHONE AT 1-800-268-6060 (MONITORED 24/7).
2. NOTIFY THE TOWNSHIP OF SOUTHGATE PUBLIC WORKS MANAGER AT 519-378-3777.
3. IMMEDIATELY IMPLEMENT MEASURES TO (1) STOP THE SPILL; AND (2) CONTAIN THE SPREAD OF THE SPILL. MEASURES TO CONTAIN THE SPILL MAY INCLUDE: RECOVER THE SPILLED SUBSTANCE INTO SUITABLE CONTAINERS; CONSTRUCT A BERM OR EXCAVATE A SHALLOW DITCH TO MINIMIZE THE SPREAD OF THE SUBSTANCE; EXCAVATE AND CONTAIN CONTAMINATED SOIL IN A LOADER BUCKET OR STORAGE BIN UNTIL PROPER DISPOSAL CAN BE ARRANGED.
4. CONTAMINATED SOIL IN THE AREA AFFECTED BY THE SPILL SHALL BE REMOVED AND TRANSPORTED BY A LICENSED HAULER TO A SUITABLE WASTE DISPOSAL SITE APPROVED BY THE MECP.

TECHNICAL RECOMMENDATIONS

HYDROGEOLOGY

SOURCE: HYDROGEOLOGICAL ASSESSMENT REPORT FOR ABOVE-WATER EXTRACTION, PROPOSED HOGS BACK PIT, PART LOT 31, CONCESSION 3 (PROTON), TOWNSHIP OF SOUTHGATE, GREY COUNTY (GSS ENGINEERING CONSULTANTS LTD., DECEMBER 2021)

RECOMMENDED MONITORING PLAN

- H1. WATER LEVEL MEASUREMENTS AT THE EXISTING ON-SITE MONITORING WELLS (MW1, MW2, MW3, MW4), STAFF GAUGES (SG1, SG2, SG3), AND PIEZOMETER (P1) SHALL BE CARRIED OUT FOR ONE YEAR FOLLOWING ISSUANCE OF THE HYDROGEOLOGICAL REPORT, WITH A MINIMUM OF THREE EVENTS IN THE SPRING (MARCH, APRIL, MAY) AND ONE EVENT EACH IN THE SUMMER AND FALL.
- H2. FOLLOWING APPROVAL OF AGGREGATE EXTRACTION AT THE SITE, WATER LEVEL MEASUREMENTS AT THE EXISTING MONITORING WELLS, STAFF GAUGES, AND PIEZOMETER SHALL BE CARRIED OUT AT A MINIMUM FREQUENCY OF THREE TIMES PER YEAR IN THE SPRING, SUMMER, AND FALL FOR THE FIRST THREE YEARS OF EXTRACTION OPERATIONS.
- H3. AT THE END OF THREE YEARS, THE MONITORING DATA SHALL BE SUMMARIZED IN A REPORT PREPARED BY A QUALIFIED PROFESSIONAL AND SUBMITTED TO THE MNRF, WITH A RECOMMENDATION TO EITHER DISCONTINUE THE MONITORING PROGRAM OR TO CONTINUE THE MONITORING PROGRAM FOR A SPECIFIED MINIMUM NUMBER OF ADDITIONAL YEARS.
- H4. IF IT IS RECOMMENDED THAT MONITORING BE DISCONTINUED, AND THE MNRF CONCURS WITH THE FINDINGS OF THE REPORT, THEN THE MONITORING WELLS SHALL BE PROPERLY ABANDONED IN ACCORDANCE WITH THE REQUIREMENTS OF O.REG. 903 AND AMENDING REGULATIONS.

NATURAL ENVIRONMENT

SOURCE: HOGS BACK ABOVE WATER PIT APPLICATION, LOT 31, CONCESSION 3, TOWNSHIP OF SOUTHGATE, COUNTY OF GREY (SAAR ENVIRONMENTAL LIMITED, DECEMBER 2021)

RECOMMENDED MITIGATION MEASURES

- E1. USE OF NIGHT LIGHTS SHALL BE RESTRICTED TO PROMOTE NOCTURNAL AND CREPUSCULAR FOREST WILDLIFE CONSERVATION. IF NIGHT LIGHTS ARE NECESSARY FOR NIGHT-TIME SECURITY OF THE SITE AND/OR EQUIPMENT, THEN DOWNWARD DIRECTED (HOODED) LIGHTS SHALL BE USED.
- E2. EASTERN WOOD PEWEE (EWPW) ARE PROTECTED UNDER THE MIGRATORY BIRDS CONVENTION ACT. TO CONSERVE THE EWPW AND OTHER FOREST BIDS, A QUALIFIED BIOLOGIST SHALL INSPECT THE SITE PRIOR TO THE START OF SITE PREPARATION AND EXTRACTION ACTIVITIES TO CONFIRM THE PRESENCE/ABSENCE OF ACTIVE NESTS WITHIN 50 m OF THE EXTRACTION AREA.
- E3. TO CONSERVE FOREST BREEDING BIRDS, NOISE FROM EXTRACTION ACTIVITIES SHALL BE LIMITED BY RESTRICTING THE OPERATION OF HEAVY EQUIPMENT TO DAYTIME PERIODS OUTSIDE OF DUSK AND DAWN. MAXIMUM WORKDAY HOURS SHALL BE BETWEEN 7:00 A.M. AND 6:00 P.M. WHERE POSSIBLE, PEAK NOISE-MAKING OPERATIONS (E.G., CRUSHING) SHALL BE SCHEDULED TO OCCUR OUTSIDE THE PEAK BIRD-BREEDING PERIOD FROM MAY 15 TO JUNE 30. REFER TO NOTE 26, HOURS OF OPERATION, ON THIS PLAN.
- E4. TO SUPPORT THE NORTHERN RIBBONSNAKE, OPTIMAL HABITAT FOR FORAGING AND HIBERNACULAE SHALL BE PROTECTED WITH A MINIMUM 15 m SETBACK FROM IDENTIFIED WETLANDS. REFER TO NOTE 12, SETBACKS, ON THIS PLAN.
- E5. TO CONSERVE POTENTIAL BANK-NESTING WILDLIFE, CREATION OF LONG-TERM STOCKPILES THAT WILL BE IN PLACE FOR MORE THAN 60 DAYS SHALL BE AVOIDED TO REDUCE IMPACTS TO BURROWING WILDLIFE (E.G., BELTED KINGFISHER) WHEN REMOVING THE STOCKPILE. STOCKPILES THAT HAVE BEEN UNDISTURBED FOR MORE THAN 90 DAYS SHALL NOT BE DISTURBED DURING THE PEAK BREEDING/NESTING SEASON OF MAY TO AUGUST WITHOUT FIRST BEING INSPECTED BY A QUALIFIED BIOLOGIST. IF A NEST(S) IS IDENTIFIED, THEN THE STOCKPILE SHALL BE CORDONED OFF WITH TEMPORARY FENCING OR SUITABLE ALTERNATIVE AND LEFT UNDISTURBED UNTIL THE NEST HAS BEEN VACATED. REFER TO NOTE 3, TOPSOIL/OVERBURDEN STORAGE, AND NOTE 16, AGGREGATE STOCKPILES, ON THIS PLAN.
- E6. A MINIMUM SETBACK RANGING FROM 15 TO 30 m SHALL BE MAINTAINED BETWEEN AGGREGATE EXTRACTION ACTIVITIES AND IDENTIFIED WETLANDS, DEPENDING ON: A) THE PRESENCE OF ADJACENT ECOLOGY FEATURES AND FUNCTIONS, AND (B) THE OPPORTUNITY TO MAXIMIZE SETBACKS. REFER TO NOTE 12, SETBACKS, ON THIS PLAN AND OVERRIDE 3.
- E7. REHABILITATION OF THE EXTRACTION AREA SHALL INCLUDE RE-FORESTATION TO CREATE A LINKAGE BETWEEN THE ADJACENT WETLANDS. NATIVE FLORA THAT INCORPORATES SON TRADITIONAL FLORA SHALL BE PLANTED IN THE AREAS TO BE RE-FORESTED. REFER TO NOTES 2 AND 3 ON DRAWING 3, REHABILITATION PLAN.
- E8. TO CONSERVE OPTIMAL HABITAT FOR MONARCH BUTTERFLY, EXISTING MILKWEED AREAS ON THE SITE SHALL BE ENHANCED BY PLANTING ADDITIONAL MILKWEED AND NECTAR PLANTS ON THE OUTER EDGES OF THE RESTORED AREAS. REFER TO NOTE 4 ON DRAWING 3, REHABILITATION PLAN.

RECOMMENDED MONITORING PLAN

- E9. MONITORING SHALL BE CARRIED OUT AT 2-YEAR INTERVALS FOR INDICATOR SPECIES AS FOLLOWS: FOR BIRDS, PRESENCE/ABSENCE OF EASTERN WOOD PEWEE AND VEERY IN THE PROVINCIALLY SIGNIFICANT WETLAND; AND FOR PLANTS, DOCUMENTATION OF VEGETATION IN TWO 1-METRE SQUARE QUADRATS 30 m INTO THE PROVINCIALLY SIGNIFICANT WETLAND

ARCHAEOLOGY

SOURCE: STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT, GRAVEL PIT EXPANSION, 046365 SOUTHGATE ROAD 04, PART LOT 31, CONCESSION 3, FORMER TOWNSHIP OF PROTON, MUNICIPALITY OF SOUTHGATE, GREY COUNTY (SCARLETT JANUSAS ARCHAEOLOGY INC., OCTOBER 2019)

- A1. NO FURTHER ARCHAEOLOGICAL ASSESSMENT IS REQUIRED FOR THE STUDY AREA.
- A2. THE REMAINDER OF THE LOT STILL MAY RETAIN ARCHAEOLOGICAL POTENTIAL AND MUST BE SUBJECT TO A STAGE 2 ARCHAEOLOGICAL ASSESSMENT SHOULD ANY DEVELOPMENT BE PROPOSED FOR THE LOT, EXCEPTING THE STUDY AREA.
- A3. COMPLIANCE LEGISLATION MUST BE ADHERED TO IN THE EVENT OF DISCOVERY OF DEEPLY BURIED CULTURAL MATERIAL OR FEATURES.

LEGEND

- LICENCE BOUNDARY
- PROPERTY OWNED BY APPLICANT
- PROPERTY LINE
- LOT/CONCESSION LINE
- 495 EXISTING CONTOURS (m AMSL)
- EXISTING FENCE (P&W)
- EXISTING TREE LINE
- TREE
- ACCESS ROAD
- WETLAND LIMITS (FROM NETR, SAAR 2021)
- POND FEATURE
- WATERCOURSE
- STRUCTURE
- SITE ENTRANCE/EXIT
- GRAVEL STOCKPILE
- EXCAVATION FACE
- MONITORING WELL
- SURFACE WATER STAFF GAUGE
- PIEZOMETER
- CROSS-SECTION LOCATION
- LIMIT OF EXTRACTION
- 495.0 PROPOSED PIT BOTTOM ELEVATION
- PROPOSED TOPSOIL/OVERBURDEN BERM
- DIRECTION OF EXTRACTION
- PRODUCT TRANSPORTATION VIA HAUL ROAD
- MP PROPOSED MARKER POST
- PHASE BOUNDARY AND NUMBER

DD/MM/YY	DESCRIPTION

AMENDMENT

THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS 'A' LICENCE FOR A PIT ABOVE THE GROUNDWATER TABLE.

THIS PLAN WAS PREPARED UNDER THE DIRECTION OF A QUALIFIED PERSON AS PER SECTION 0.2(3) OF O.REG. 466/20 UNDER THE AGGREGATE RESOURCES ACT.

REGISTERED PROFESSIONAL ENGINEER — M. R. SLAUGHTER — Feb 18/22 — PROVINCE OF ONTARIO

ROSS SLAUGHTER, P.ENG. — DATE: FEB. 18, 2022

GSS ENGINEERING CONSULTANTS LTD
Unit 104D 1010 9th Avenue West, Owen Sound, ON, N4K 5R7
Telephone: (519) 372-4828

Title:

OPERATIONAL PLAN

DRAWING 2 OF 3

HOGS BACK PIT

PART OF LOT 31, CONCESSION 3
GEOGRAPHIC TOWNSHIP OF PROTON
TOWNSHIP OF SOUTHGATE
COUNTY OF GREY

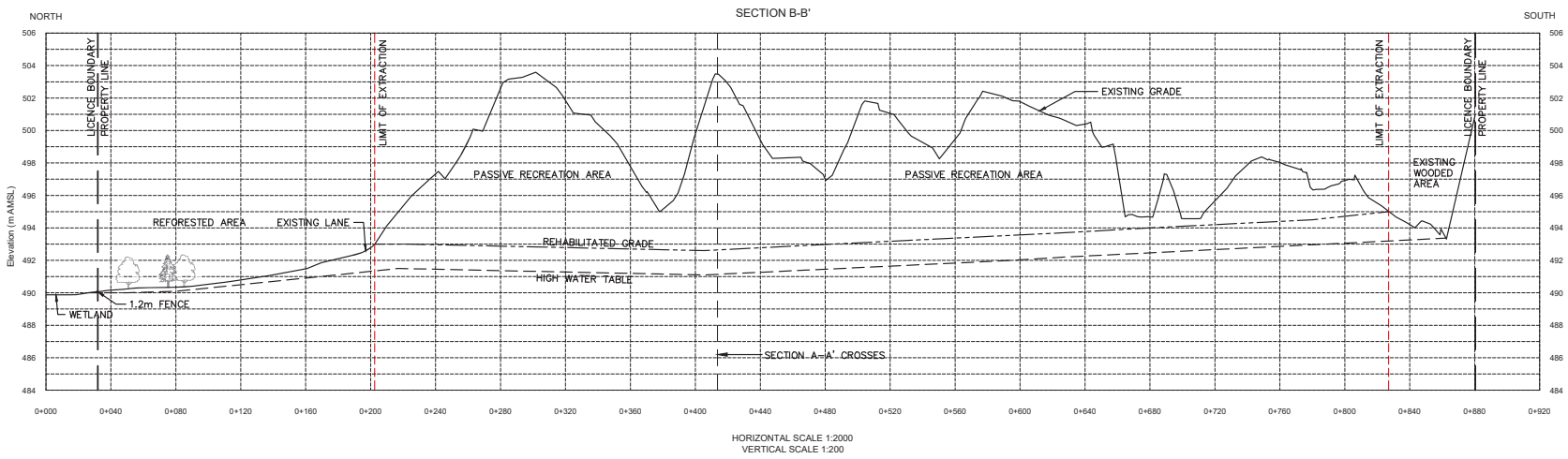
Applicant:

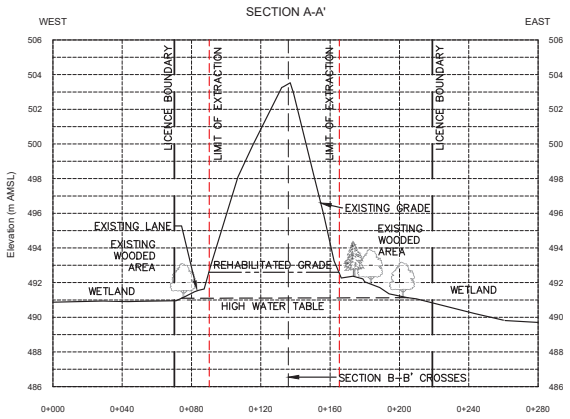
H. BYE CONSTRUCTION LTD.
395 CHURCH STREET
MOUNT FOREST, ON N0G 2L2

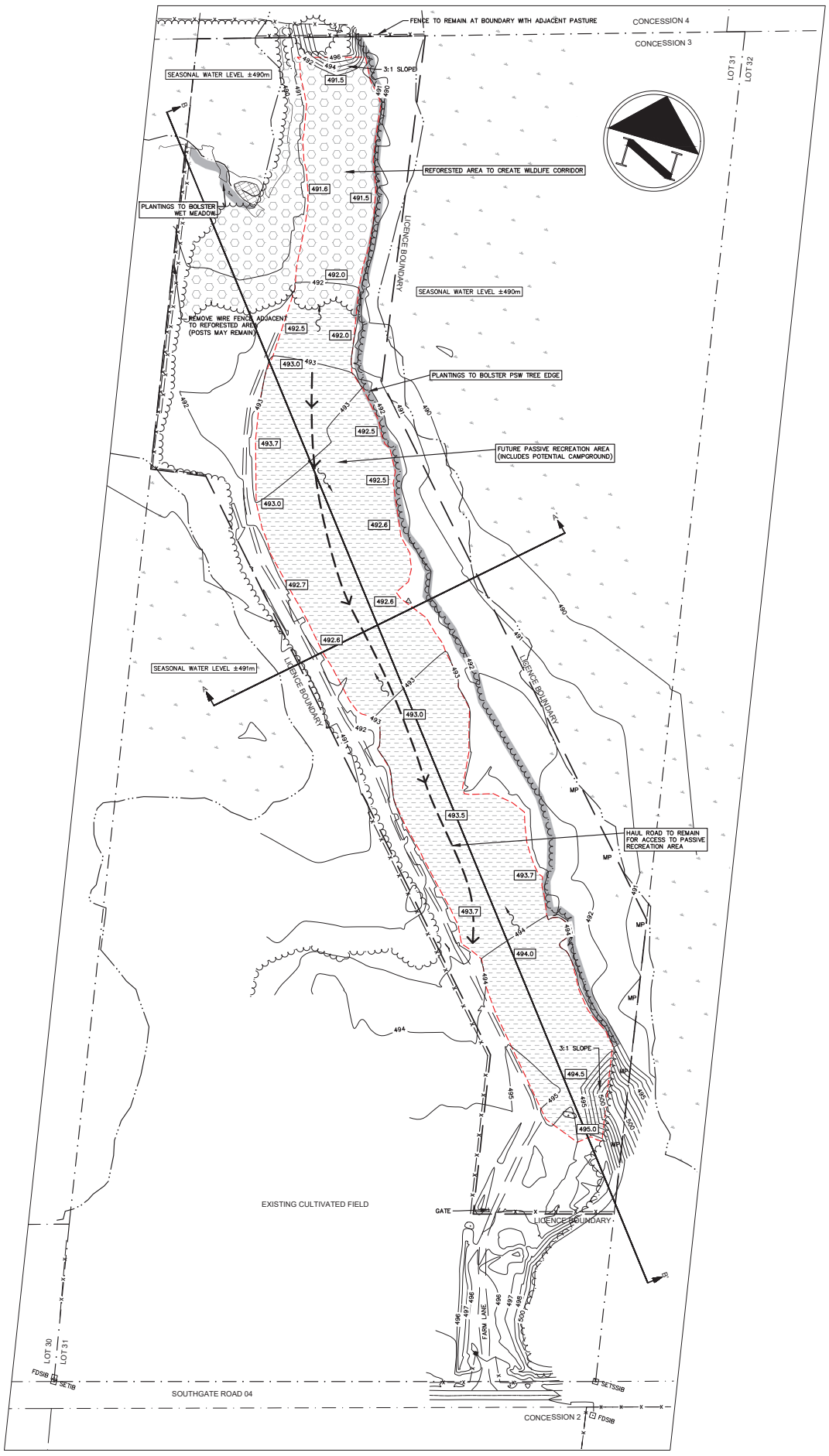
RANDY BYE, PRESIDENT — DATE

Design:	WBB	Scale: 1:2000
Drawn:	TDL	0 — 50 — 100 Metres
Reviewed:	MRS	
Date:	FEB. 2022	

Reference No. 19-047-02







REHABILITATION NOTES

1. THE AREA OF EXTRACTION TO BE REHABILITATED IS 5.77 HECTARES. AN ADDITIONAL AREA OF APPROXIMATELY 0.75 HA BEYOND THE AREA OF EXTRACTION WILL BE REFORESTED.
2. THE SOUTHERN PORTION OF THE EXTRACTION AREA IS TO BE REHABILITATED FOR FUTURE PASSIVE RECREATIONAL USE, INCLUDING A POTENTIAL CAMPGROUND, AND THE NORTHERN PORTION OF THE EXTRACTION AREA IS TO BE REFORESTED TO CREATE A WILDLIFE CORRIDOR, AS SHOWN ON THIS PLAN. THE REFORESTED AREA SHALL EXTEND A MINIMUM OF 200 m SOUTH FROM THE NORTH PROPERTY BOUNDARY.
3. AREAS TO BE REFORESTED SHALL BE PLANTED WITH SUITABLE NATIVE FLORA THAT INCORPORATE SON TRADITIONAL FLORA. AS DETAILED IN APPENDIX A OF THE NATURAL ENVIRONMENT TECHNICAL REPORT (SAAR ENVIRONMENTAL LIMITED, DECEMBER 2021), TREE AND SHRUB SPECIES FOR CONSIDERATION ARE: RED-OSIER DOGWOOD, PINCHERRY, IRONWOOD, WHITE CEDAR, BASSWOOD, WHITE ELM, AND TREMBLING ASPEN. CEDAR IS INTENDED FOR PLACEMENT IN THE WET MEADOW MARGINS WITH TREMBLING ASPEN STARTER CROPS.
4. IN ACCORDANCE WITH THE RECOMMENDED MITIGATION MEASURES IN THE NETR (SAAR ENVIRONMENTAL, 2021), ENHANCED PLANTINGS SHALL BE MADE ALONG THE SOUTHERN PERIMETER OF THE WETLAND MEADOW, ADJACENT TO THE DUGOUT POND, IN THE NORTHWEST PORTION OF THE SITE, AND ALSO ALONG THE MARGIN OF THE WETLAND LOCATED EAST OF THE EXTRACTION AREA TO BOLSTER THE FOREST EDGE, AS SHOWN APPROXIMATELY ON THIS PLAN.
5. RECOMMENDED PLANT SPECIES (NETR, SAAR 2021) FOR ENHANCED PLANTINGS ALONG THE MARGIN OF THE WETLAND MEADOW IN THE NORTHWEST PORTION OF THE SITE ARE SMOOTH SAWGRASS, COMMON RUSH, POVERTY OAT GRASS, SWAMP GOLDENROD, JOE-PYE-WEED, UPLAND WHITE ASTER, ASTER NOVA-ANGLIAE, HAREBELL, YARROW, SWAMP MILKWEED, PANICLED BULRUSH, AND GREEN BULRUSH. SEEDS SHALL BE BROADCAST IN THE WET MEADOW AREA AND AROUND THE POND. THE SEED MIX WILL ESTABLISH OVER TIME AND BOLSTER THE SUPPORT OF BIRDS AND INSECTS INCLUDING THE OBSERVED SPECIAL CONCERN MONARCH BUTTERFLY. ENHANCED PLANTINGS IN THE NORTHWEST PORTION OF THE SITE WILL OCCUR FOLLOWING ENHANCED PLANTINGS ALONG THE MARGIN OF THE EAST WETLAND.
6. RECOMMENDED SHRUB AND TREE SPECIES (NETR, SAAR 2021) TO BOLSTER THE FOREST EDGE EAST OF THE EXTRACTION AREA ARE THE SAME AS THE SPECIES FOR THE REFORESTED AREA IDENTIFIED IN NOTE 3. ENHANCED PLANTINGS ALONG THE MARGIN OF THE EAST WETLAND WILL PROCEED IN A NORTHERLY DIRECTION IN CONJUNCTION WITH THE PLANNED EXTRACTION, IN A PROGRESSIVE REHABILITATION MANNER.
7. THE IDENTIFIED AREA TO BE REHABILITATED FOR FUTURE PASSIVE RECREATION SHALL BE PLANTED WITH A SUITABLE MIXTURE OF NATIVE GRASS AND FORB SPECIES THAT AVOIDS INVASIVE SPECIES.
8. REHABILITATION WILL BE PROGRESSIVE AND WILL PROCEED AS THE LIMITS OF EXCAVATION ARE REACHED. THE SEQUENCE OF REHABILITATION WILL GENERALLY PROCEED FROM SOUTH TO NORTH FOLLOWING THE DIRECTION OF EXTRACTION SHOWN ON DRAWING 2. THE HAUL ROUTE LOCATED WITHIN THE EXTRACTION AREA WILL BE MAINTAINED UNTIL EXTRACTION AT THE NORTH END OF THE SITE IS COMPLETE AND THE SLOPE AT THE NORTH END OF THE SITE HAS BEEN FULLY REHABILITATED. THE HAUL ROUTE WILL THEN BE REHABILITATED IN A NORTH TO SOUTH DIRECTION TO THE LIMIT OF THE REFORESTED AREA. THE HAUL ROUTE WITHIN THE FUTURE PASSIVE RECREATION AREA WILL REMAIN TO PROVIDE ACCESS.
9. SLOPES AT THE NORTH AND SOUTH ENDS OF THE SITE SHALL BE REHABILITATED AS THE LIMITS OF EXTRACTION ARE REACHED AND SHALL BE NO STEEPER THAN 3:1. SLOPES SHALL BE CREATED BY BACKFILLING WITH ON-SITE OVERBURDEN. IT IS ANTICIPATED THAT SUFFICIENT OVERBURDEN WILL BE AVAILABLE ON SITE TO CONSTRUCT THE SLOPES.
10. OVERBURDEN STRIPPED FROM THE AREA OF EXTRACTION SHALL BE PLACED AND GRADED ON THE PIT FLOOR PRIOR TO PLACEMENT OF TOPSOIL. TOPSOIL EXCAVATED FROM THE SITE SHALL BE UNIFORMLY SPREAD/GRADED ON THE PIT FLOOR AND COMPLETED SLOPES WITH A MINIMUM THICKNESS OF 0.15 m. ALL OF THE EXISTING TOPSOIL ON THE SITE WILL BE AVAILABLE FOR USE IN REHABILITATION OF THE SITE. TOPSOIL MAY BE IMPORTED TO CREATE A FINAL COVER UP TO 0.3 m THICK TO FACILITATE REHABILITATION (SEE NOTE 12). SLOPED AREAS SHALL BE IMMEDIATELY STABILIZED WITH A SUITABLE GROUND COVER AND THEN REFORESTED THE FOLLOWING SPRING.
11. REHABILITATION OPERATIONS SUCH AS STRIPPING AND EARTH MOVING SHALL TAKE PLACE ONLY WHEN THE SOIL IS DRY TO REDUCE COMPACTING OF THE SOIL.
12. CLEAN INERT FILL CONSISTING OF TOPSOIL FROM LOCAL AGRICULTURAL SITES MAY BE IMPORTED TO FACILITATE PIT REHABILITATION. ONLY SUFFICIENT MATERIAL TO CREATE A FINAL COVER UP TO 0.3 m THICK MAY BE IMPORTED. THE VOLUME OF IMPORTED TOPSOIL SHALL NOT EXCEED 8,700 CUBIC METRES. THE LICENSEE MUST ENSURE THAT THE MATERIAL IS TESTED AT THE SOURCE IN ACCORDANCE WITH O.REG. 406/19 FOR EXCESS SOIL MANAGEMENT BEFORE IT IS DEPOSITED ON THE SITE. THE TESTING MUST CONFIRM THAT THE MATERIAL MEETS THE MECP TABLE 1 STANDARDS AS SET OUT IN THE MECP "SOIL, GROUND WATER AND SEDIMENT STANDARDS FOR USE UNDER PART XV.1 OF THE ENVIRONMENTAL PROTECTION ACT". TESTING RESULTS FOR IMPORTED MATERIALS SHALL BE RETAINED AND PROVIDED TO THE MECP AND/OR MNRF UPON REQUEST.
13. FINAL SURFACE DRAINAGE WILL FOLLOW THE REHABILITATED CONTOURS AS SHOWN AND WILL BE MANAGED BY INFILTRATION INTO THE UNDERLYING PERMEABLE GRANULAR SOILS THAT WILL REMAIN IN PLACE AFTER EXTRACTION OF THE GRANULAR MATERIAL MORE THAN 1.5 m ABOVE THE HIGH WATER TABLE IS COMPLETED.
14. REHABILITATED AREAS ARE TO BE RE-GRADED AND RESEEDED/REPLANTED IN THE EVENT OF WASHOUTS.
15. ANY VEGETATION OR TREES THAT DIE OR ARE OTHERWISE DAMAGED SHALL BE RESEEDED OR REPLANTED.
16. THERE SHALL BE NO BUILDINGS ON SITE UPON COMPLETION OF REHABILITATION.
17. THE EXISTING LANE THAT EXTENDS ALONG THE WEST SIDE OF THE SITE, WEST OF THE EXTRACTION AREA, WILL REMAIN TO PROVIDE ACCESS TO THE NORTH END OF THE PROPERTY. THE DRIVEWAY TO THE SITE FROM SOUTHGATE ROAD 04 WILL BE MAINTAINED TO PROVIDE ACCESS TO THE CULTIVATED FIELD LOCATED SOUTHWEST OF THE LICENSED AREA AND TO THE PASSIVE RECREATION AREA.

TECHNICAL RECOMMENDATIONS

NATURAL ENVIRONMENT

SOURCE: HOGS BACK ABOVE WATER PIT APPLICATION, LOT 31, CONCESSION 3, TOWNSHIP OF SOUTHGATE, COUNTY OF GREY (SAAR ENVIRONMENTAL LIMITED, DECEMBER 2021)

SPECIFICATIONS

E1. PLANTING SPECIFICATIONS:

- E1.1 ONLY LOCAL NATIVE PLANTS SHALL BE USED, WITH NO INVASIVE SPECIES. A SUITABLE SPECIES LIST CAN BE OBTAINED FROM THE SAUGEEN VALLEY CONSERVATION AUTHORITY (SVCA) TO USE AS A GUIDE IF SUBSTITUTIONS ARE REQUIRED FOR THE APPROVED PLANT STOCK LISTS.
- E1.2 TO MIMIC NATURE AND ACHIEVE MAXIMUM WILDLIFE VALUE, PLANTING SHALL BE IN CLUSTERS AND NOT STRAIGHT LINES.
- E1.3 SIGNIFICANT DIE-BACK OR DAMAGE TO PLANTINGS (I.E., 20% OR MORE) WITHIN TWO YEARS OF PLANTING SHALL BE REPLACED BY THE OWNER.

E2. SEED SOURCE: NATIVE SEED COLLECTED IN THE LOCAL ECO-DISTRICT AND/OR PROPAGATED BY LOCAL NURSERIES SHALL BE USED. SOME SUITABLE TREE AND SHRUB SPECIES MAY BE AVAILABLE AT ANNUAL SALES BY THE SVCA.

E3. INVASIVE SPECIES CONTROL: INSTALLATION OF ORNAMENTAL PLANTS AT THE PROPOSED CAMPGROUND SHALL BE RESTRICTED. INCREASES IN THE INVASIVE SPECIES ALREADY PRESENT SHALL BE LIMITED BY USING AGGREGATE FROM THE SITE WHEREVER POSSIBLE FOR FUTURE USES. USE OF IMPORTED FILL MATERIAL, AND IN PARTICULAR FILL MATERIAL FROM OUTSIDE THE LOCAL ECO-DISTRICT, SHALL BE AVOIDED. INVASIVE PLANT SPECIES ENCOUNTERED WHILE PLANTING NATIVE SPECIES SHALL BE REMOVED.

E4. MONITORING: THE OWNER SHALL ACCEPT SITE INSPECTION AUDITS BY REPRESENTATIVES OF SAAR, THE SVCA, AND/OR THE LOCAL MUNICIPALITY FOR UP TO TWO GROWING SEASONS AFTER INITIAL PLANTING TO ASSESS PLANTING SUCCESS AND TO DETERMINE IF REPLACEMENT STOCK IS REQUIRED IN ANY AREAS.

LEGEND

- LICENCE BOUNDARY
- PROPERTY OWNED BY APPLICANT
- PROPERTY LINE
- LOT/CONCESSION LINE
- 495 EXISTING CONTOURS (m AMSL)
- EXISTING FENCE (P&W)
- EXISTING TREE LINE
- TREE
- ACCESS ROAD
- WETLAND LIMITS (FROM NETR, SAAR 2021)
- POND FEATURE
- WATERCOURSE
- DIRECTION OF SURFACE DRAINAGE
- CROSS-SECTION LOCATION
- LIMIT OF EXTRACTION
- 495.0 PROPOSED PIT BOTTOM ELEVATION
- REFORESTED AREA
- ENHANCED PLANTINGS
- FUTURE PASSIVE RECREATION

DD/MM/YY	DESCRIPTION
	AMENDMENT

THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS 'A' LICENCE FOR A PIT ABOVE THE GROUNDWATER TABLE.

THIS PLAN WAS PREPARED UNDER THE DIRECTION OF A QUALIFIED PERSON AS PER SECTION 0.2(3) OF O.REG. 466/20 UNDER THE AGGREGATE RESOURCES ACT.

REGISTERED PROFESSIONAL ENGINEER M. R. SLAUGHTER Feb 18/22 PROVINCE OF ONTARIO

ROSS SLAUGHTER, P.ENG. — FEB. 18, 2022 DATE

GSS ENGINEERING CONSULTANTS LTD
Unit 104D 1010 9th Avenue West, Owen Sound, ON, N4K 5R7
Telephone: (519) 372-4828

Title:

SECTIONS AND REHABILITATION PLAN

DRAWING 3 OF 3

HOGS BACK PIT

PART OF LOT 31, CONCESSION 3
GEOGRAPHIC TOWNSHIP OF PROTON
TOWNSHIP OF SOUTHGATE
COUNTY OF GREY

Applicant:

H. BYE CONSTRUCTION LTD.
395 CHURCH STREET
MOUNT FOREST, ON N0G 2L2

RANDY BYE, PRESIDENT — DATE

Design:	WBB	Scale:	1:2000
Drawn:	TDL		0 50 100 Metres
Reviewed:	MRS		
Date:	FEB. 2022		

Reference No. 19-047-03

PLOTTED: Thursday, February 24, 2022 9:41:15 AM

G:\GSS Common\2019\19-047 H Bye, Proposed Pit, Southgate\Drawings\Survey (Nov 17 2020)\19-047.dwg Feb 24, 2022 - 9:41am

2.0 LANDSCAPE AND EXISTING CONDITIONS

2.1 Physiography and Geology

As noted within the related Hydrogeological Assessment prepared by GSS, the Site is located in the physiographic region of the Dundalk Till Plain (Chapman and Putnam, 1984). The Dundalk Till Plain is a gently rolling till plain ranging in elevation from 523 masl to 485 masl. According to the Ontario Geological Survey Aggregates Resources Inventory of Proton Township (ARIP 51, 1981), at the time of maximum glacial extent, Proton Township was covered by a submass, or lobe, of the main continental ice sheet. As the ice advanced to the southeast, a layer of glacial till was deposited at its base. This till deposit, known as Tavistock Till, generally occurs in the southern and central portions of Proton Township. During a subsequent retreat and advance of the ice lobe, another till, known as the Elma Till was deposited in the central and northern sections of Proton Township, forming a rolling till plain with numerous drumlin fields. This ice eventually melted in place with meltwater flowing through crevasses and at the base of the ice, forming several southeast trending esker deposits, including two well developed single-segmented ridges, named the Keldon Esker and the Egerton Esker. The Keldon Esker constitutes a narrow ridge which crosses the Site in a north-south direction containing stratified sand and gravel materials. ARIP 51 identifies the Keldon Esker as containing a high-quality crushable aggregate.

The Site is underlain by dolostone rock of the Guelph formation with depth to bedrock between 15 and 23 metres.

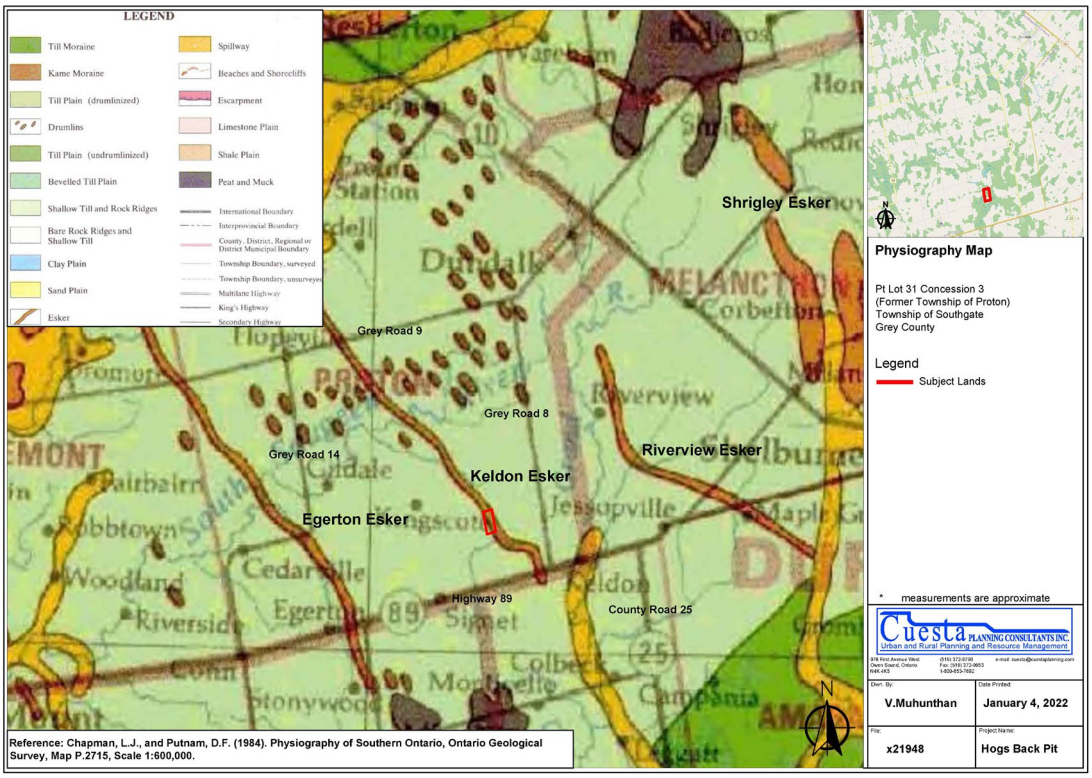


Figure 3 – Physiography

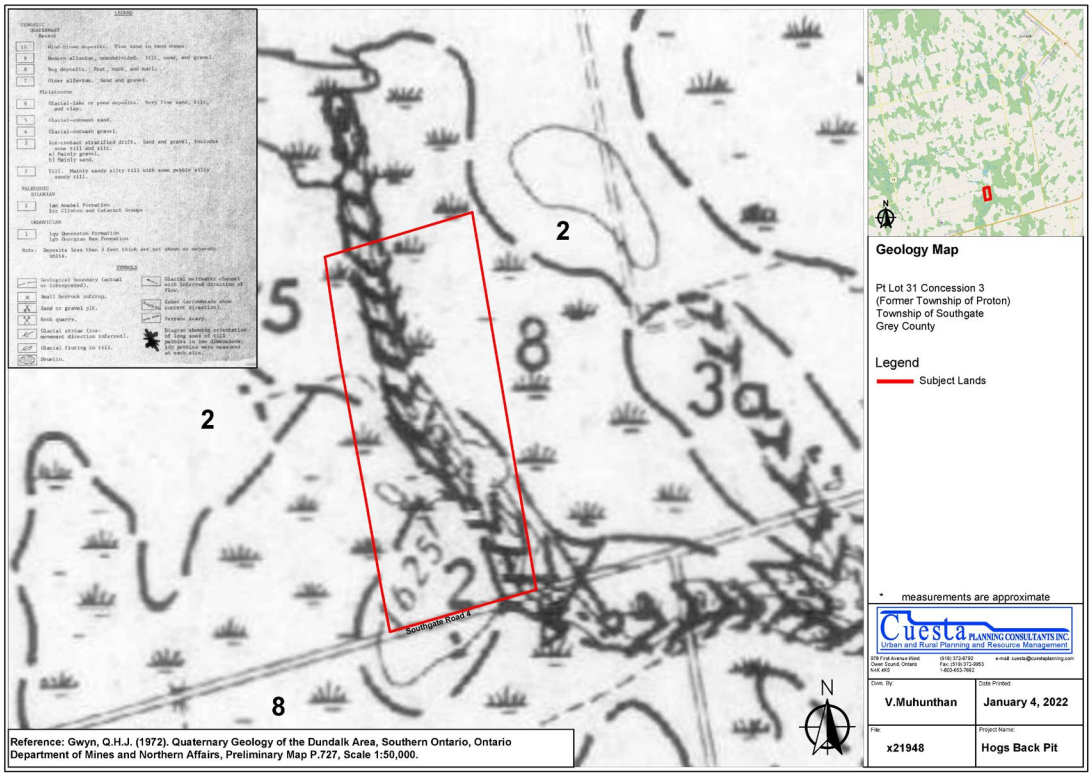


Figure 4 – Geology

2.2 Description of the Site

The Site is situated on a 41.17-hectare parcel in a rural area of the Township of Southgate (Township) near the border of Grey and Wellington Counties. The esker (or Hog's Back) itself is located in the north and central section of the Site and is the dominant physical feature of the parcel, extending across the Site in a north-south direction, with a flat crest and steep side slopes. The elevation of the esker ranges from 496 masl in the north portion of the Site to 503 masl in the centre of the Site with a width of 65m in the north of the Site, widening to 120m in the southeast corner of the parcel. The remainder of the parcel is relatively flat with wooded wetlands located to the east and west of the esker and extending beyond the parcel to both the east and west. The elevation of the east and west wetlands is 490 masl and 491 masl respectively.

A wetland located northwest of the parcel extends into the northwest corner of the Site and there is a small dug pond in the southeast corner of this wetland. Beyond the parcel, a watercourse flows easterly into this northwest wetland and then flows out of this wetland in a northerly direction. No watercourses were mapped on the parcel itself. The GSS Hydrogeological Assessment determined that much of the parcel and all the Site, drained in a northerly direction toward the northwesterly flowing watercourse.

While the esker was previously tree-covered, significant clearing has recently occurred at the Site by the previous owner of the parcel. In the southwest section of the parcel, a relatively small area of land is cropped. Other historical land use on the site includes a former wayside pit located on the esker in the southern portion of the Site, accessed from Southgate Road 4 via an internal graveled lane. A less developed internal lane/cart trail also extends along the west side of the esker. Other than a small shed west of the graveled lane, the parcel is vacant.

2.3 Surrounding Land Use

As noted previously, the parcel is located in a rural area of the Township. To the immediate east, west and south of the parcel are undeveloped lands, covered in low-lying woodlands/wetlands. The PSWs to the east and west of the Site have been identified as managed forest/Conservation Authority lands.

The property to the north contains a mix of pasture lands and wooded areas with no residence or outbuildings associated with the agricultural use. Southeast of the parcel, across the municipal roadway is an existing below water gravel extraction operation owned by the Town of Grand Valley. The closest residence to the Site is approximately 700 metres to the east.

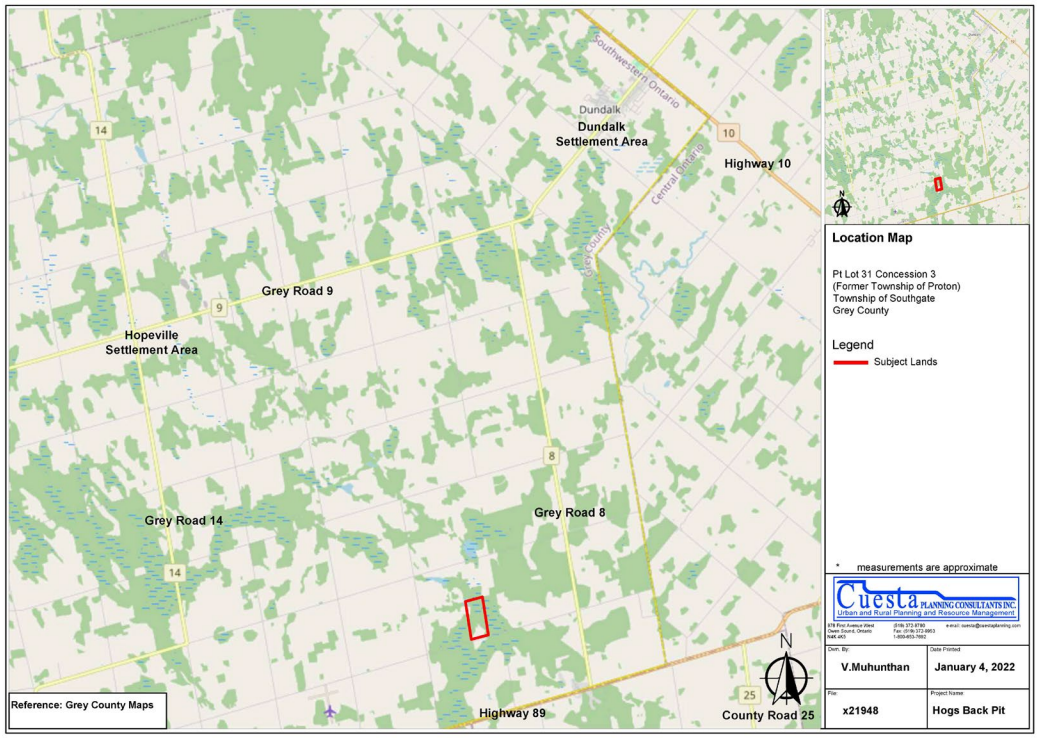


Figure 5 – Location

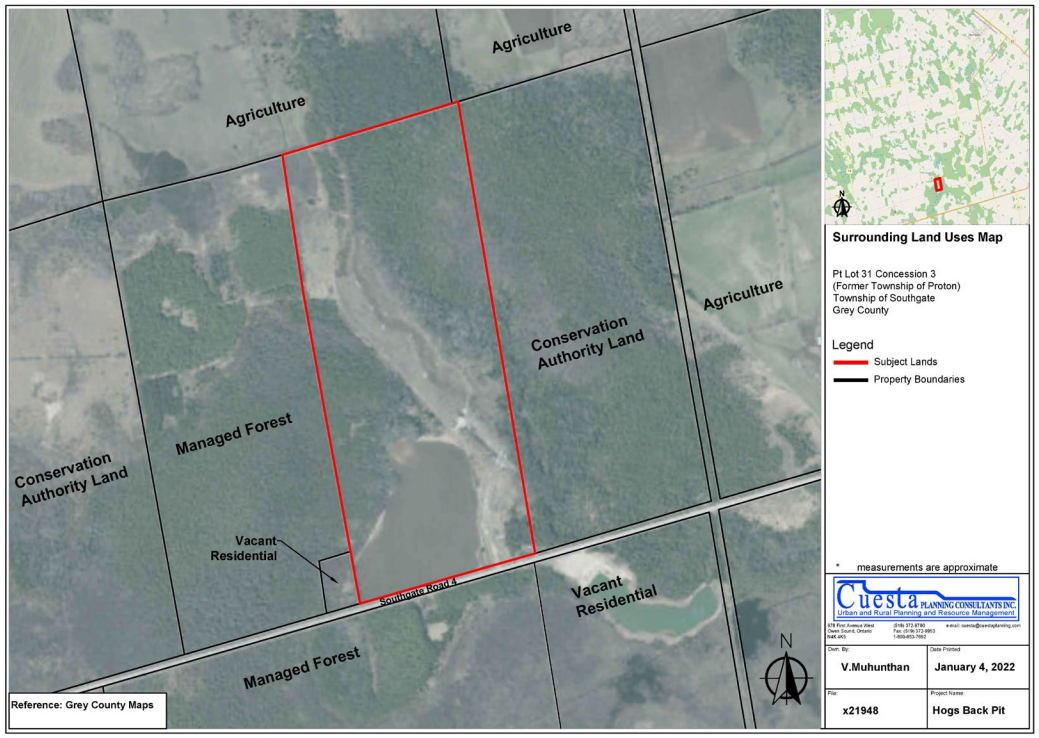


Figure 6 – Site and Surrounding Land Use

3.0 LAND USE CONSIDERATIONS: PROVINCIAL INTERESTS

2020 Provincial Policy Statement (PPS 2020)
2.0 Wise Use and Management of Resources Ontario's long-term prosperity, environmental health, and social well-being depend on conserving biodiversity, protecting the health of the Great Lakes, and protecting natural heritage, water, agricultural, mineral and cultural heritage and archaeological resources for their economic, environmental and social benefits.

As noted in the Preamble to this Statement, both the ARA and the *Planning Act* include matters of provincial interest which are to be considered by the approval authorities when reviewing license and land use applications. These provincial interests are reflected in the ARA Provincial Standards requirements, the Provincial Policy Statement (PPS) and subsequently within upper and lower tier official plan policies. An application under the ARA and/or the *Planning Act* must have regard for these legislative and policy requirements to be considered an appropriate land use. In the case of aggregate development, often more than one provincial interest exists, and it is the goal of sound land use planning to balance and protect these competing interests. In this instance, the mineral resource deposit on the Site, the Keldon Esker, has also been identified as part of an Earth Science Area of Natural and Scientific Interest (ANSI).

The following is a summary of the key provincial resources and interests relevant to the subject aggregate proposal. It should be noted that, while the policy referenced herein is from the PPS, the intent of Section 12 (1) of the ARA (Appendix C) is also reflected in these provincial land use policies. This section will review the technical report findings and identify how potential impacts to these resources will be monitored and attenuated during the overall lifespan and rehabilitation of the Site.

3.1 Mineral Aggregate Resources

PPS 2020
2.5 Mineral Aggregate Resources
2.5.1 Mineral aggregate resources shall be protected for long-term use and, where provincial information is available, deposits of mineral aggregate resources shall be identified.
2.5.2 Protection of Long-Term Resource Supply

2.5.2.1 (in part) As much of the mineral aggregate resources as is realistically possible shall be made available as close to markets as possible.

As noted previously, the proposed pit will be located on a portion of the Keldon Esker with the physiographic region of the Dundalk Till Plain as identified by Chapman and Putman in the Physiography of Southern Ontario, 1984.

ARIP 51 (1981) has identified the Keldon Esker as a Selected Sand and Gravel Resource Area of primary significance (Resource Area 1) as reflected by current and past extraction sites in the general vicinity of this deposit.

ARIP 51 reported the Keldon Esker to have a local relief of 8m to 18m and composed of coarse sand and gravel, with oversize material noted as present throughout the deposit. ARIP 51 goes on to note that the two eskers in this area of the Township, one being the Keldon Esker, contained virtually all of the former Proton Township's possible resources for crushable aggregate which confirms the significance of this local mineral resource.

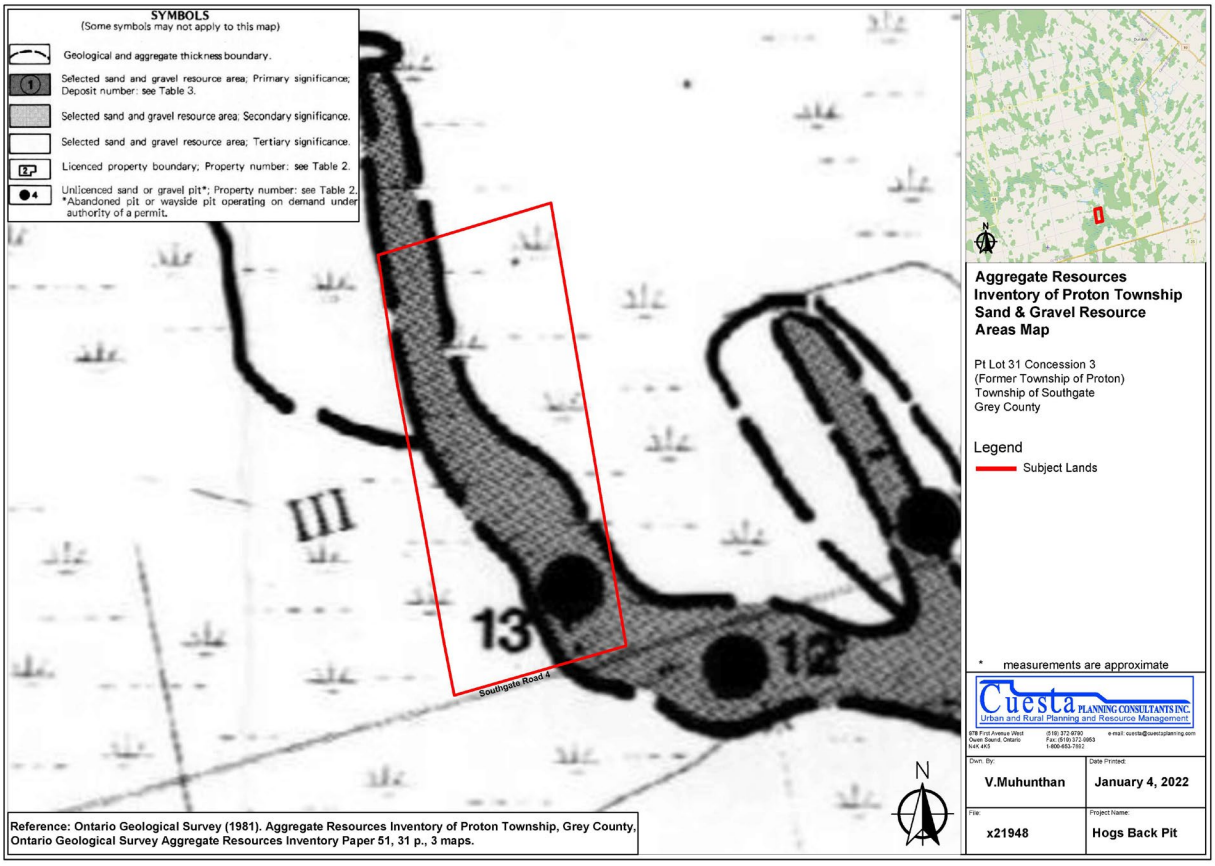


Figure 7 – Sand and Gravel Resource (ARIP 51)

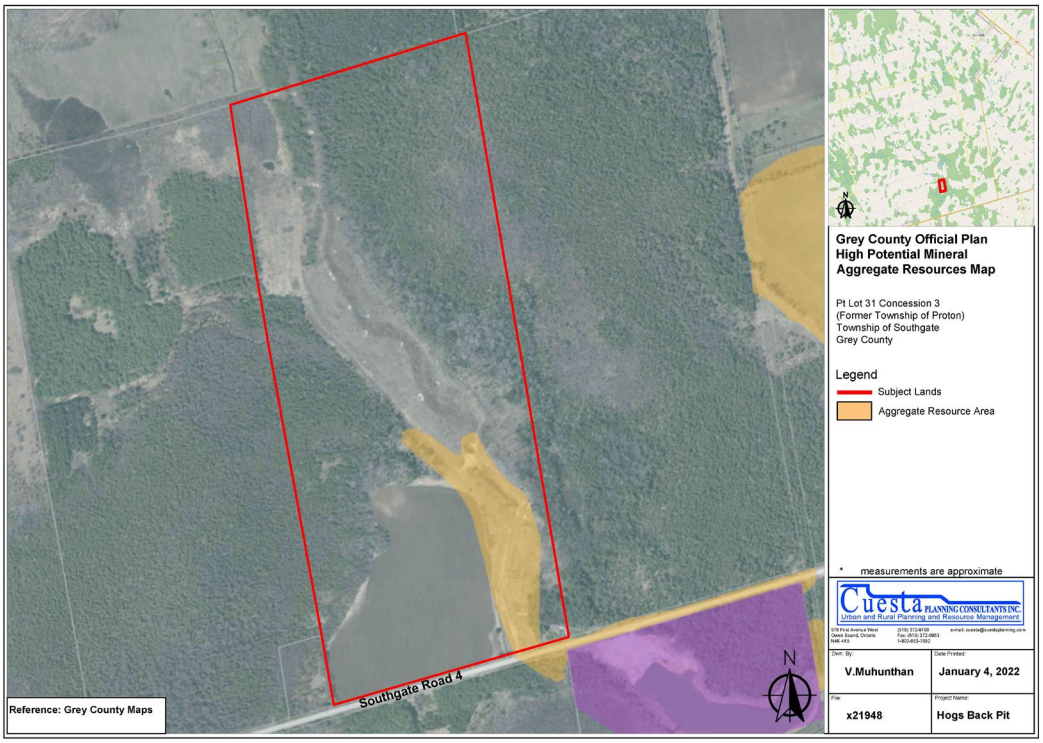


Figure 8 – Aggregate Resources Area (Grey County)

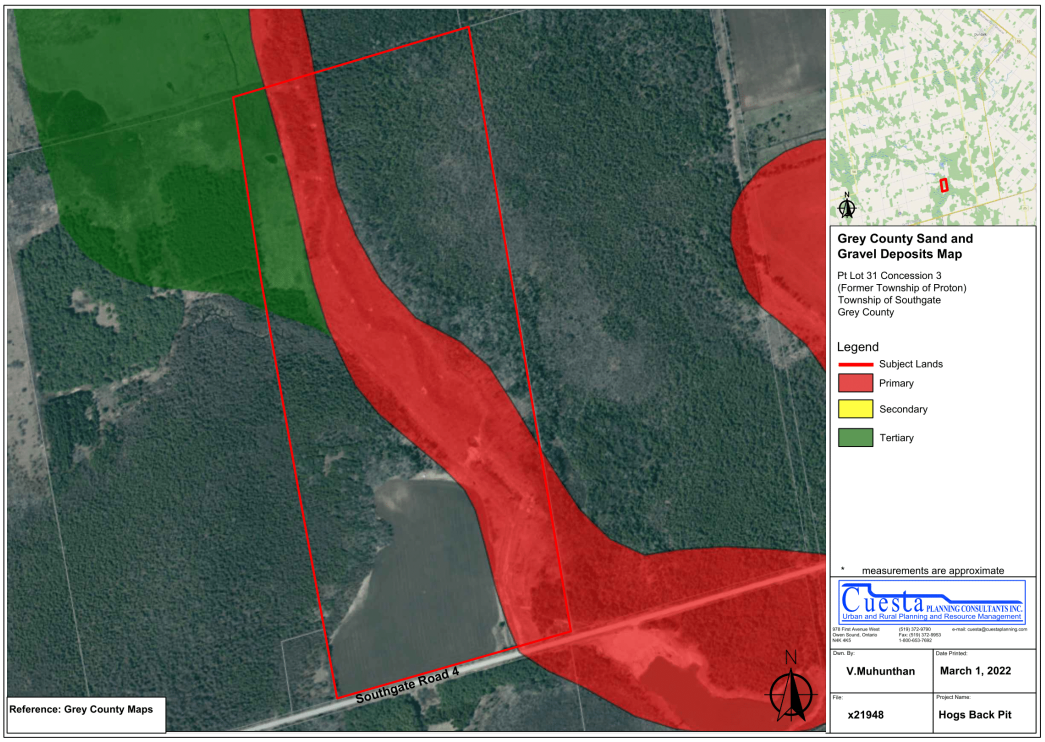


Figure 9 – Sand and Gravel Deposit (Grey County)

The upper tier (Grey County) and lower tier (Township of Southgate) Official Plans reflect the findings of ARIP 51. Both the County of Grey and Township of Southgate have designated the Site as partially or fully within an Aggregate Resources Area, respectively.

The applicant dug a number of test holes on the Site which provided preliminary confirmation of the expected on-site resource. The boreholes advanced on the Site as part of the Hydrogeological Assessment all encountered stratified granular soils below the surficial topsoil, comprised of both sand and gravel. This sampling confirmed the findings of ARIP 51 that a high-quality resource is located within the Site.

Through a comparison of the ground surface contours and the pit bottom elevations, GSS determined the estimated volume of aggregate at the 5.77-hectare area Site as approximately 336,000 tonnes.

It is therefore confirmed, through document review and on-site analysis, that a provincially significant aggregate resource occurs on this Site. The development of this resource has been carefully balanced with the remainder of relevant provincial resources.

3.2 Agricultural Resources

PPS 2020
2.3 Agriculture
2.3.1 Prime agricultural areas shall be protected for long-term use for agriculture. Prime agricultural areas are areas where prime agricultural lands predominate. Specialty crop areas shall be given the highest priority for protection, followed by Canada Land Inventory Class 1, 2, and 3 lands, and any associated Class 4 through 7 lands within the prime agricultural area, in this order of priority.

Prime agricultural areas are a key provincial interest which is required to be identified in planning documents to reduce the fragmentation of agriculturally capable (Classes 1-3) lands.

Figure 10 – Canadian Land Inventory Soils Mapping

In addition, the Provincial Standards require the agricultural classification of the Site, to be identified using the Canada Land Inventory (CLI) Classes.

The subject parcel has a mixed CLI classification. The southwestern portion of the parcel which is currently cropped contains Class 1 soils composed primarily of a sandy, silty till. The soil at this section of the Site is likely Elma Till but could be a mix of Elma Till and Tavistock Till. This relatively small portion of the property will remain outside of the area of extraction and could therefore remain under cultivation over the long-term.

The on-site wetlands have been classified as Organic and are not represented by a soils type.

The esker has a soils classification of 6TS-4FM which reflects a soil type that has equally severe limitations of steep topography and low natural moisture and fertility. A 4FM Soils class is a strong indication that the soils are very gravelly in nature.

Neither the upper nor lower tier official plans designate the subject lands as being within an Agricultural designation and the CLI mapping review has confirmed the agrarian

limitations of the soils at the Site. It can therefore be determined that no agricultural resources are located at this Site which could be impacted by the extraction.

3.3 Natural Heritage Resources

PPS 2020
2.1 Natural Heritage
2.1.1 Natural features and areas shall be protected for the long term.
2.1.2 The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.

The Provincial Standards and the PPS require applications to conduct a Natural Environment Technical Report (NETR) to determine if any of the seven natural heritage features, specified in the PPS are located on, or within 120 metres of the Site being licensed. Should the NETR identify one or more of these natural heritage features, the NETR must assess the degree of impact the aggregate operation may have on the feature or its ecological function and propose preventative or mitigative measures to protect these natural heritage resources. Schedule C to the County of Grey Official Plan has previously identified a portion of the Site as being within a Core Area of the County's Natural Heritage System.

A NETR dated February 2022 was prepared by SAAR as part of the application requirements. Field work was conducted throughout spring, summer, autumn and the early winter seasons in 2020 with two (2) additional follow-up site inspections of potential denning habitat in the fall of 2021. Following the field surveys, the relevant natural heritage features were assessed using the applicable policy and guidelines to establish if the quantity, quality and type of nature confirmed at or near the Site met thresholds established for provincial significance.

In addition to the seasonal surveys noted above, staff of SAAR conducted a review of the extent of provincially significant wetlands (PSWs) at the Site which resulted in a refinement of the mapped boundaries of the PSWs. This refinement has been reflected on the ARA Site Plans.

The natural heritage review by SAAR confirmed the following natural heritage features on or near the Site;

- significant wetlands (Keldon Swamp Wetland Complex)
- fish habitat
- significant woodlands
- significant wildlife habitat (Northern Ribbonsnake, forest interior breeding birds and potential black bear)
- significant area of natural and scientific interest ((ANSI) Keldon Esker)

The NETR has concluded that extraction of a portion of the esker can occur without negative impact provided recommended setbacks and mitigation are implemented at the Site and maintained during the lifespan of the operation. In addition to operational setbacks and requirements, SAAR has recommended biennial monitoring for interior forest breeding birds and wetland vegetation during the lifespan of the pit.

With respect to rehabilitation of the Site, SAAR has recommended the northern portion of the Site be reforested to create a wildlife corridor between the east and west PSWs. This wildlife linkage will also include plantings to bolster the wet meadow west of the Site and the edge of the PSW east of the Site. Details related to the required planting plan (plant, shrub and tree species) as well as on-going monitoring of the plantings have been incorporated into the Rehabilitation Plan site plan notes.

The following summarizes the key recommendations from the NETR which have been included on the Operational and Rehabilitation Plans and notes.

- Plant native shrub and tree species including species traditionally used by local First Nations during rehabilitation of the pit/creation of the wildlife corridor (Rehabilitation Plan)

- Enhance existing milkweed areas used by Monarch with targeted nectar source plantings (Rehabilitation Plan)

- Restrict night lights. If security lights are required for machinery yard, use downward directed "hooded" lights (Operational Plan)

- Retain dead standing and or stub trees at PSW forest edges (east PSW) unless they present a safety hazard (Operational Plan)

- Eastern Wood Pewee (EWPW) are protected under the Migratory Birds Convention Act. A qualified biologist must inspect the Site before construction to confirm presence/absence of active nest within 50m of extraction limit (Operational Plan)

- Limit construction noise by restricting heavy machinery outside of dusk and dawn, to maximum workdays of 7:30am – 7:30pm, restricting peak noise where

possible from May 15-June 30 during bird breeding season (Operational Plan)

- Confirm presence/absence of EWPW and Veery in the east PSW on a two-year schedule. This includes establishing two (2) 1m square vegetation plots to characterize vegetation 30m into east PSW

- Conserve foraging and hibernaculae optimal habitat of the Ribbonsnake, including basking area by a 15m operational setback (Operational Plan)

- Avoid creating long term stockpiles; if over 90-day storage the stockpile should be inspected for cavity nesting wildlife (e.g., Belted Kingfisher). Avoid disturbance during peak bird nesting (April 1-August 1) unless inspection by a qualified biologist clears the area for removal. If a nest(s) is identified, then the stockpile shall be cordoned off with temporary fencing or suitable alternate and left undisturbed until the nest has been vacated. (Operational Plan)

3.3.1 Keldon Esker – Earth Science ANSI Designation

PPS 2020
2.1.5 Development and site alteration shall not be permitted in:
e) significant areas of natural and scientific interest;
unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

GSS provided a technical memorandum to staff of the Ministry of Natural Resources and Forestry (MNRF) dated February 27th, 2020 (appended to the Hydrogeological Assessment), reviewing the rationale for designating the portion of Keldon Esker located as the Site as a provincially significant ANSI in consideration of its value as a mineral resource.

While background research revealed no formal documentation for the reasoning and process for the ANSI designation, information obtained from MNRF did note that the best representation of the Keldon Esker was a portion of the ridge approximately 1.8 km southeast of the Site. The NETR has also noted that, given the number of esker landforms in the Township, there is a question as to whether the portion of esker on the Site constitutes the "best representative Earth Science ANSI" in the planning area.

As noted previously in this report, ARIP 51 states that the Keldon and Egerton Eskers constitute the only source of crushable aggregate in the Township (former Proton Township) and represent an important local resource. This primary resource is also recognized in the upper and lower tier planning documents.

This mineral resource has taken precedence over the natural heritage resource in the past as evidenced by the MNRF approval of a below water pit license just southwest of the Site (1993).

Taking the above noted into consideration, as well as historical extraction on the Site itself (wayside pit), there is valid rationale to permit the development of this mineral resource.

An increase in overall wildlife habitat and biodiversity on-site will serve to offset any impacts to the ANSI feature and make available the valuable mineral deposit.

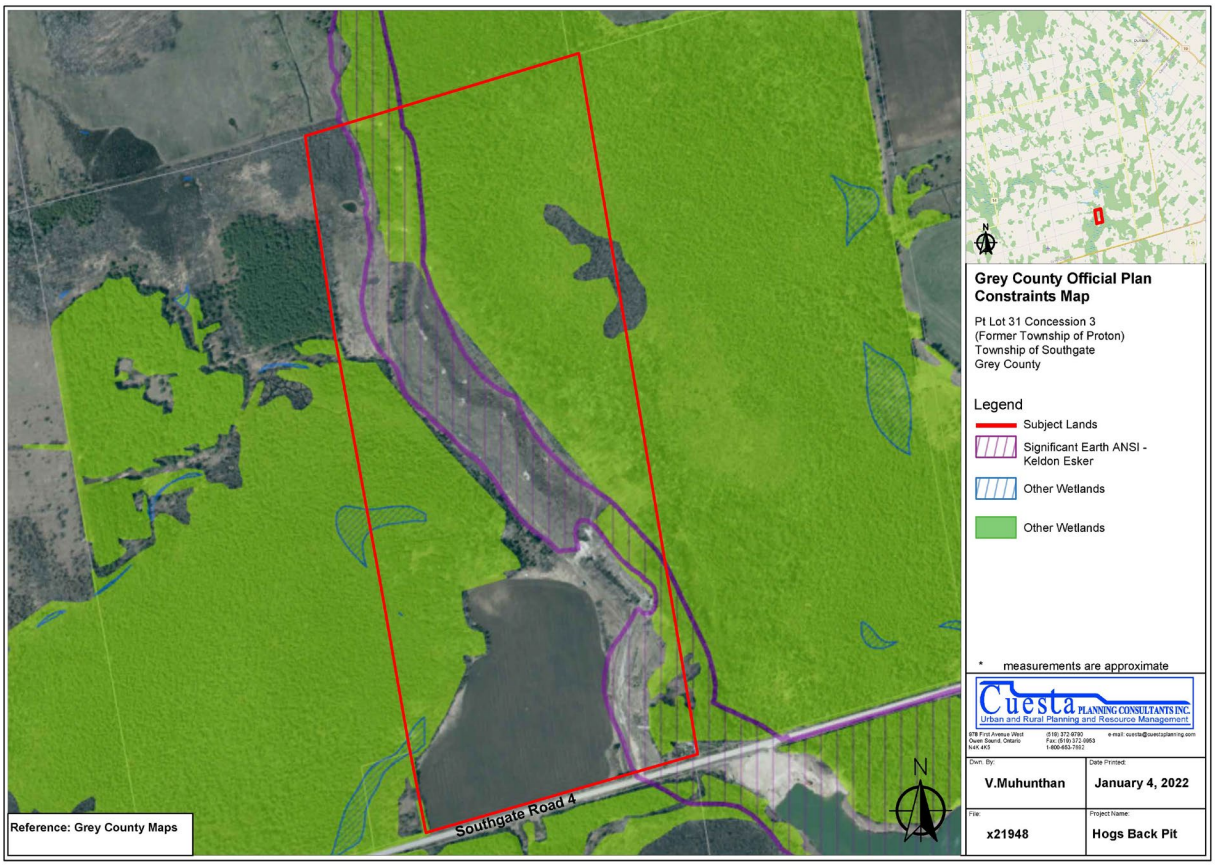


Figure 11 – Constraints Map (Grey County)

3.4 Cultural Heritage Resources

PPS2020
2.6 Cultural Heritage and Archaeology

2.6.2 Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved.

Scarlett Janasus Archaeology Inc. was retained by the applicant, to complete a Stage 1 and Stage 2 Archaeological Assessment (Assessment) at the Site as required by the Provincial Standards and the PPS.

Stage 1 of the Assessment revealed that certain criteria were met for the potential of archaeological resources to be found on the Site. The criteria included proximity to primary and secondary water sources, elevated topography, as well as strong Indigenous and early Euro-Canadian presences in the area.

The existence of such potential automatically advances the Assessment to a Stage 2 Assessment which includes field work. Field work was conducted at the Site in good weather conditions on October 18, 21 and 24, 2019. Approximately 39% of the Site was test-pitted as the remainder of the Site (61%) contained steep slopes or had been previously disturbed, primarily through previous gravel extraction. On-site field investigation determined that the area intended for extraction did not contain any item of cultural or archaeological significance.

The Stage 1 and 2 Assessment was submitted following field investigations with a letter of acceptance from MTSC received in November of 2019.

Site plan notes have been added to the ARA Operational Plan to ensure future compliance with the relevant provincial legislation (i.e.; the Ontario Heritage Act, the Cemeteries Act and the Funeral, Burial and Cremation Services Act). These notes serve to maintain the provincial interest in regard to protection of cultural and archaeological resources.

3.5 Water Resources

PPS 2020
2.2 Water
2.2.1 Planning authorities shall protect, improve or restore the quality and quantity of water by:
b) minimizing potential negative impacts, including cross-jurisdictional and cross-watershed impacts;

A Hydrogeological Assessment, dated December 2021, was completed in support of the proposal by GSS to review any potential impacts on ground and surface water resources and to establish the maximum predicted water table at the Site. As the proposal is for an above the maximum predicted water table operation, the Provincial Standards require a 1.5 m separation from the pit bottom to the predicted maximum water table.

The pit bottom elevations have been developed based on the findings of the GSS report as summarized herein.

Field work began in November of 2020 with the installation of four (4) monitoring wells at the Site. Two (2) of the wells were located on each side of the esker for future monitoring purposes if required.

Manual monitoring of groundwater levels at the Site was conducted in March, May, July and November of 2021 with continuous monitoring (using a data logger) carried out across the Site from November 2020 to November 2021.Three (3) temporary staff gauges were installed at or near the Site (adjacent wetlands and on-site dug pond) to monitor surface water levels. This data was collected on the same dates as the groundwater data.

All monitoring locations and elevations were established by a specialist survey firm.

A review of background data and the groundwater monitoring program determined the following.

- The seasonal high of the water table coincided with the spring freshet/snow melt in late spring with the highest manually measured level recorded on March 23, 2021. Annual regional precipitation data along with water level records from a well installed in similar conditions was used to verify the on-site findings. It was determined that the high-water levels recorded at the Site in 2020/2021 were representative of the typical high water table elevation at the Site.

- GSS determined the groundwater flow to be in a south to north direction at the Site.

- The maximum predicted water table measured at the Site ranged from 492.2 masl (south) to 490.1 masl (north). The maximum depth of extraction has therefore been established at 495 masl in the south end of the Site and 491.5 masl at the north end of the Site.

- As the operation will occur 1.5 metres or more above the water table and there are no water supply wells within 500 metres of the site, no direct effects of groundwater resources are expected.

- With respect to hydraulic connectivity between groundwater and surface water resources at and near the Site, GSS determined that the proposed area of

extraction would be a very minor contributor to the water supply of the PSWs based on the area of the wetlands and associated drainage area. While run-off from the esker to the PSWs would be slightly reduced following extraction, it is expected this reduction will be offset by a corresponding increase in infiltration at the Site. No potential for the pit to negatively affect the water levels in the PSWs was identified.

The Hydrogeological Assessment has recommended the following monitoring program. This program has been added to the Operational Plan notes.

- Water level measurements at the existing on-Site monitoring wells (MW1, MW2, MW3, MW4), staff gauges (SG1, SG2, SG3), and piezometer (P1) shall be carried out for one year following issuance of the hydrogeological report, with a minimum of three events in the spring (March, April, May) and one event each in the summer and fall.

- Following approval of aggregate extraction at the Site, water level measurements at the existing monitoring wells, staff gauges, and piezometer shall be carried out at a minimum frequency of three times per year in the spring, summer, and fall for the first three years of extraction operations.

- At the end of three years, the monitoring data shall be summarized in a report prepared by a qualified professional and submitted to the MNDMRF, with a recommendation to either discontinue the monitoring program or to continue the monitoring program for a specified minimum number of additional years.

- If it is recommended that monitoring be discontinued, and if the MNDMRF concurs with the findings of the report, then the monitoring wells shall be properly abandoned in accordance with the requirements of O.Reg. 903 and amending regulations.

3.5.1 Clean Water Act-Source Water Protection Area

The Provincial Standards for a Class A license require confirmation as to whether or not the proposed operation falls with in a Source Protection Area under the *Clean Water Act*. As noted in the associated Hydrogeological Assessment and as demonstrated in Figure 12 below, the Site has not been identified as within a Source Water Protection Area (Wellhead Protection Area) by the County of Grey.

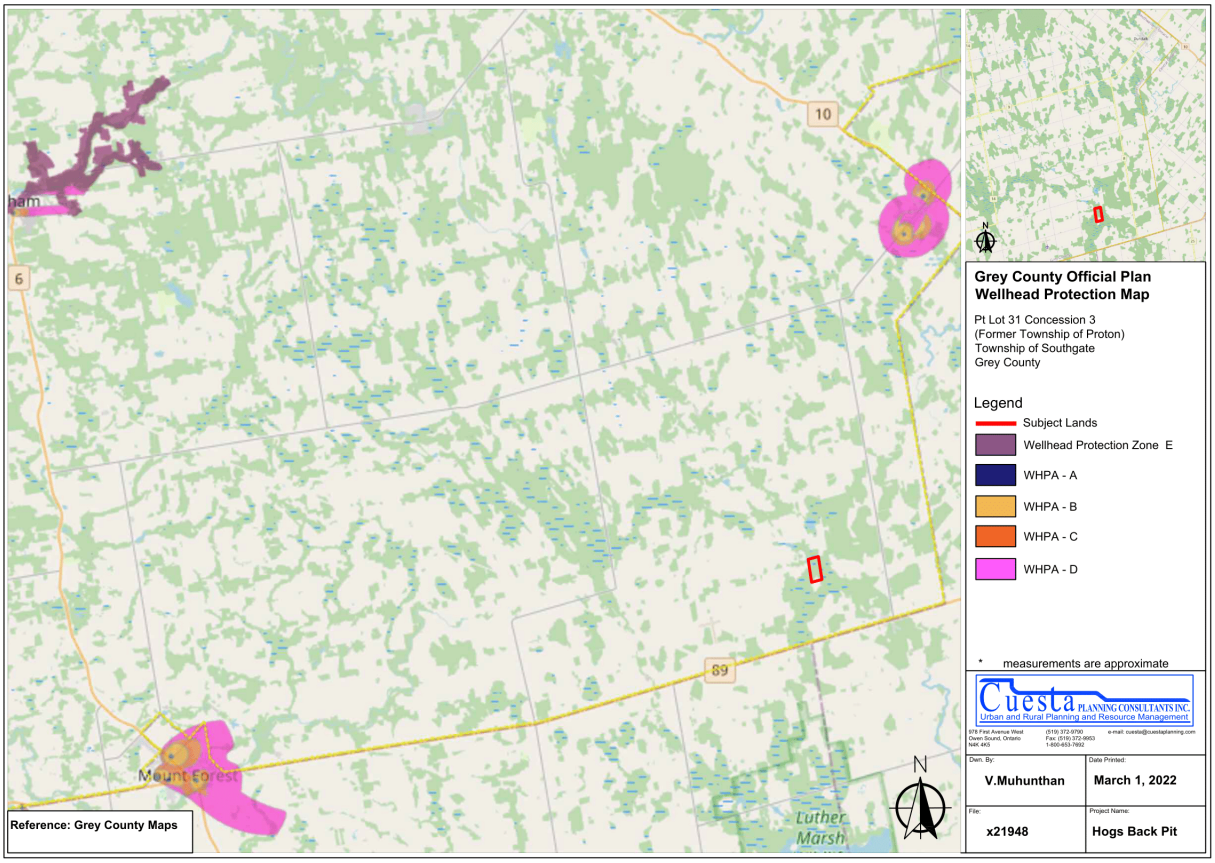


Figure 12 -Wellhead Protection Area(s) (Grey County)

3.6 Noise and Dust Impacts

PPS 2020
1.2.6 Land Use Compatibility
1.2.6.1 Major facilities and sensitive land uses shall be planned and developed to avoid, or if avoidance is not possible, minimize and mitigate any potential adverse effects from odour, noise and other contaminants, minimize risk to public health and safety, and to ensure the long-term operational and economic viability of major facilities in accordance with provincial guidelines, standards and procedures.

The Provincial Standards for a Class 'A' pit license require a noise assessment report to be conducted if extraction is proposed to occur within 150 metres of a sensitive receptor.

As the closest residence to the Site is approximately 700 metres to the east, noise related to extraction activities is not a land use compatibility concern for this proposal.
SAAR has requested certain operational restrictions related to noise be implemented at the Site to reduce impact during bird breeding season. This requirement has been added to the Operational Plan notes.

In accordance with Provincial Standards and requirements of the *Environmental Protection Act*, dust will be controlled on site by the use of water or another provincially approved dust suppressant on the internal laneway and stock-piled materials as necessary. This requirement has been added to the Operational Plan notes. Again, as the closest house is well over 500 metres away, negative impacts related to dust are not expected from the Site.

As noted previously in this Statement, the adjacent wetlands are managed conservation lands and as such, the likelihood of future residences being located near to the Site is quite minimal.

3.7 Required Approvals under the Planning Act

In addition to the issuance of a license under the ARA, it will be necessary to amend the upper and lower tier official plans and Township comprehensive zoning by-law to permit the new land use. As the mineral deposit at the Site is only partially identified by the upper tier Official Plan as being within an Aggregate Resources Area, a County of Grey Official Plan amendment will be required. The amendment is also required as the Site has been identified as within a Core Area of the County's Natural Heritage System. All new operations require amendments to both the Township of Southgate Official Plan and Comprehensive Zoning By-law to permit the new land use. A Planning Analysis of the relevant upper and lower tier Official Plans policy has been included herein as part of the *Planning Act* complete application requirements.

Currently the parcel has a mixed designation in the upper and lower tier official plans. The cultivated area of the parcel has been reflected by a Rural designation. The wetlands on the parcel are designated as Provincially Significant Wetlands (upper tier) and Wetlands (lower tier) in the Official Plans while the esker formation has been primarily designated as Hazard Lands in both documents. The Hazards Lands designation identifies the steep topography of this natural feature. As noted earlier in this Statement, SAAR has refined the extent of the PSWs on the parcel and the updated boundaries are identified on the Operational Plan. These updates should be incorporated in the land use schedules which will be required as part of the upper and lower tier official plan amendments, in addition to re-designating the proposed licensed area as a Mineral Resource Extraction use. The policy amendments will be accompanied by a by-law re-zoning the parcel from A1, EP and W zones to A1, EP, W and M4 zones.

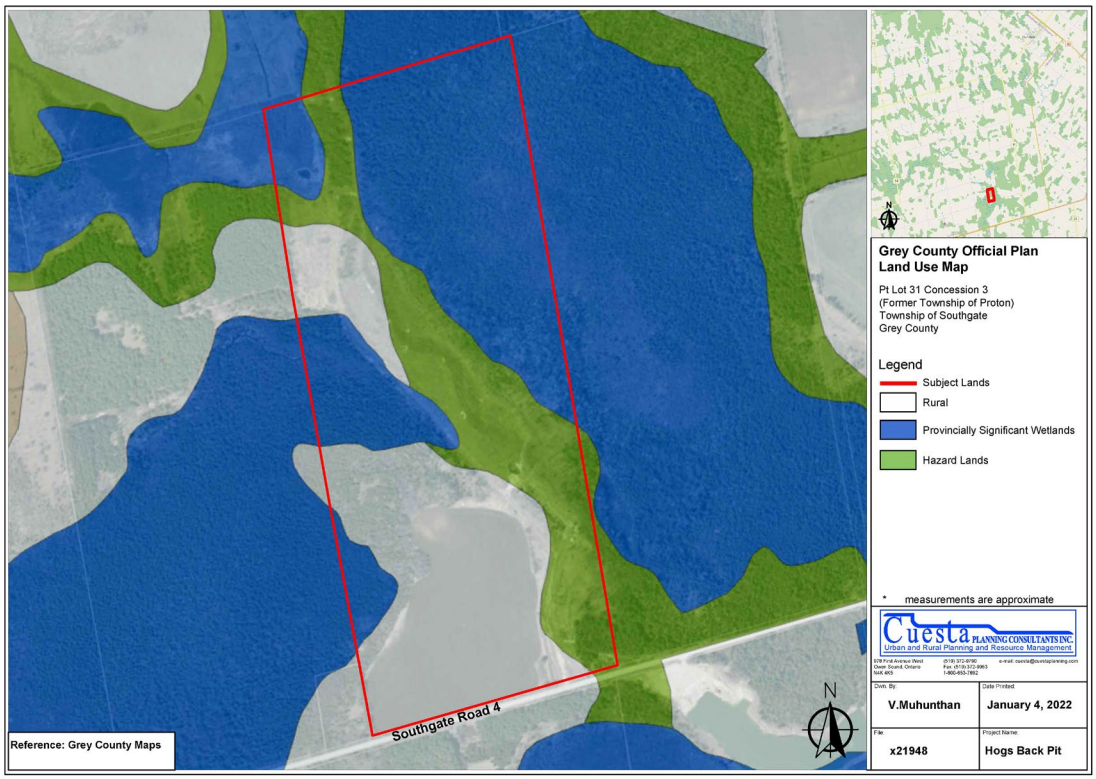


Figure 13 – Land Use Schedule (Grey County)

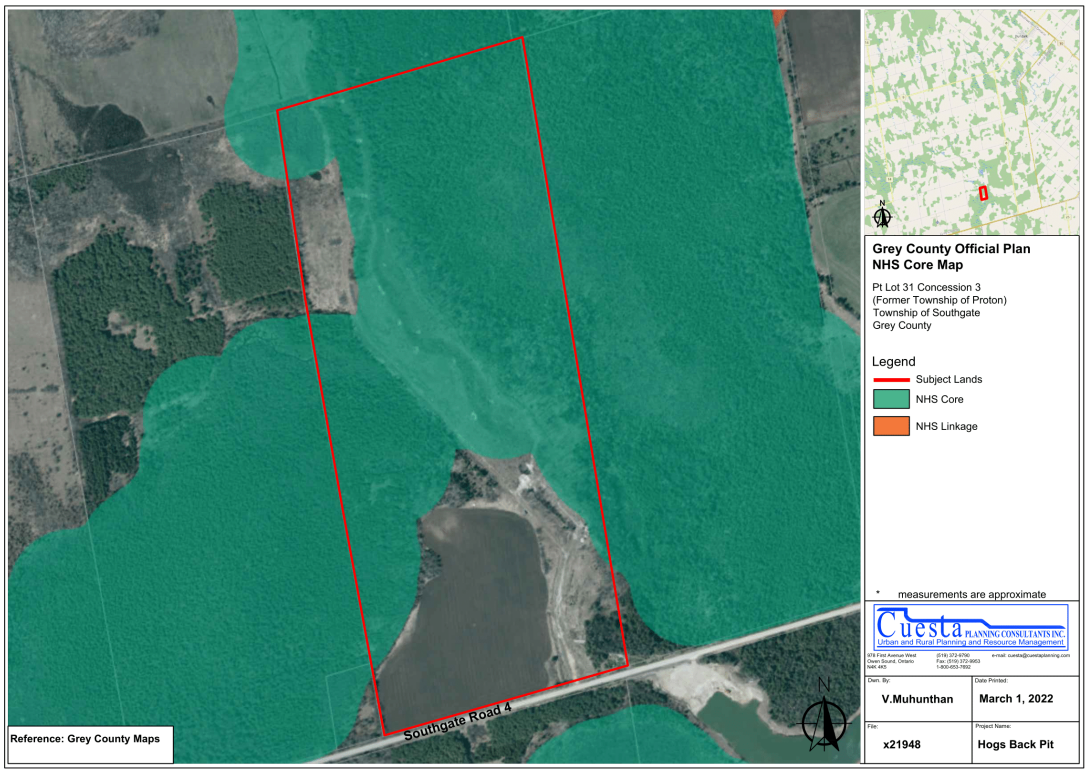


Figure 14 – Natural Heritage System Mapping (Grey County)

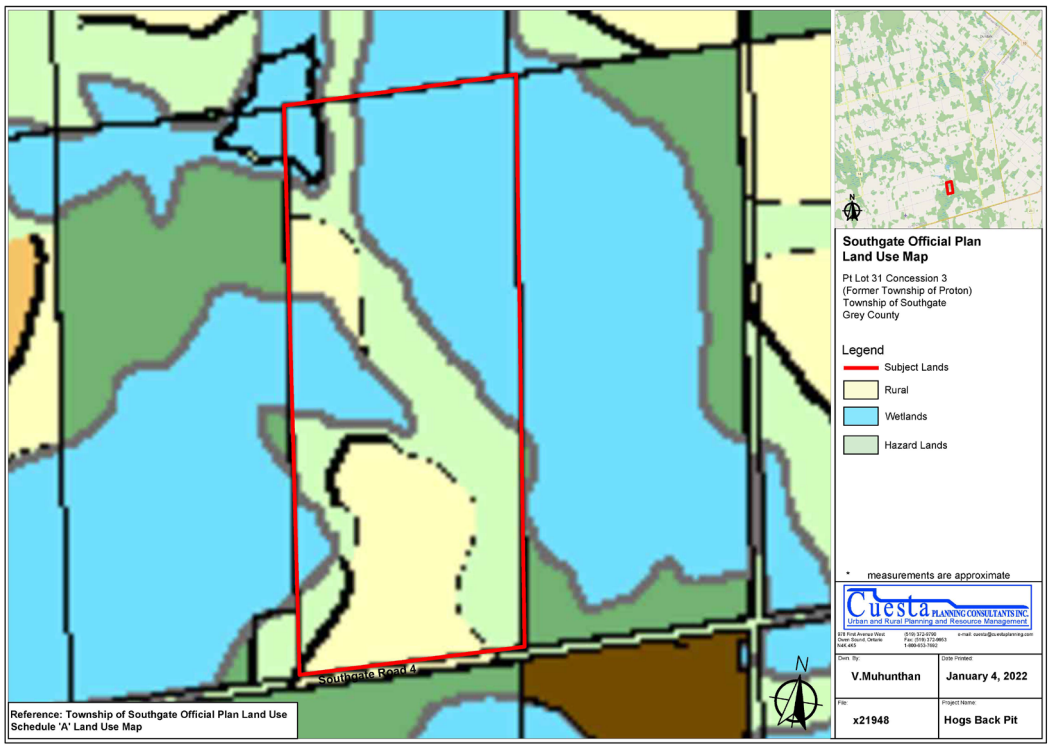


Figure 15 – Land Use Schedule (Township of Southgate)

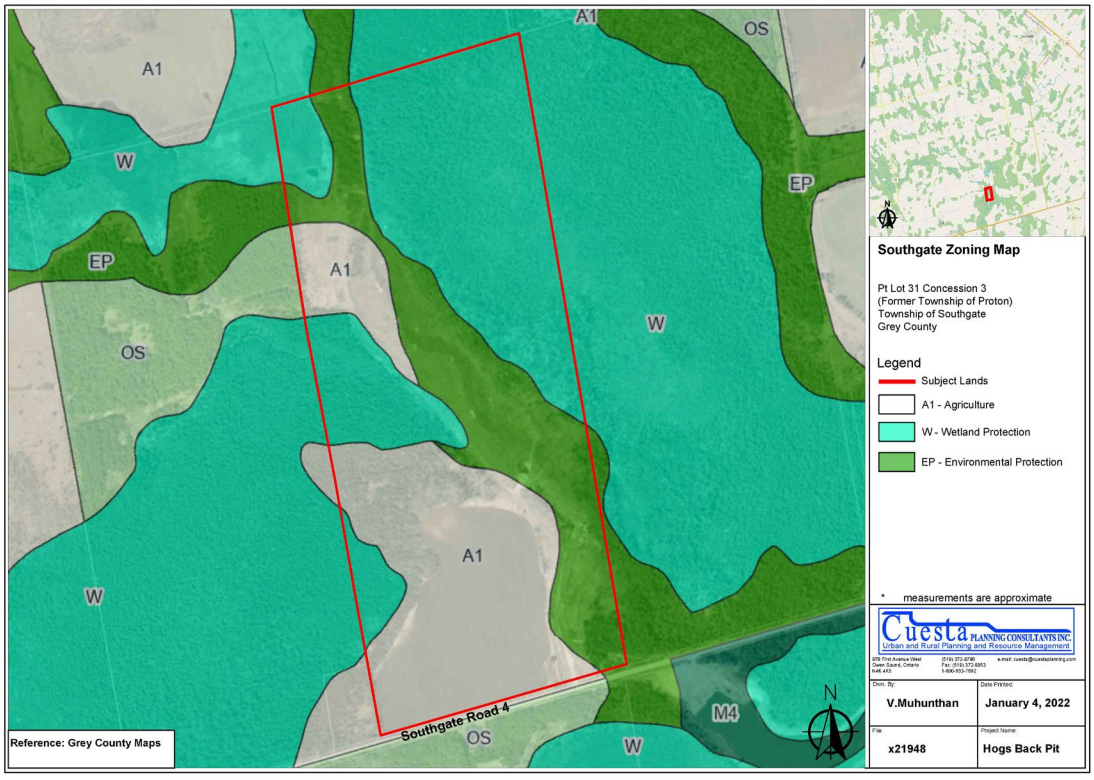


Figure 16 – Zoning By-Law Excerpt (Township of Southgate)

4.0 OFFICIAL PLAN POLICY ANALYSIS

4.1 Grey County Official Plan Policy Analysis

Policy	Evaluation
5.6.4 Policies for the Establishment of New Mineral Resource Extraction Land Use Types *(in part)*	
1) The following proposed mineral aggregate extraction operations will require an amendment to the County Official Plan except for those proposed within the Niagara Escarpment Plan Area as shown on Schedule A-Maps 1, 2 and 3: (in part) *b) All new sand and/or gravel operations proposed outside of the areas identified as an Aggregate Resource Area shown on Schedule B, or within Core Areas shown on Schedule C;* *2) Where a new or expanded pit operation is proposed partially within an Aggregate Resource Area and partially outside of an Aggregate Resource Area, an amendment to this Plan is required for those areas outside of the Aggregate 101 Resource Area. If the proposed extraction area is within the Aggregate Resource Area, an amendment to this Plan is not required.*	The Site has been identified by the Grey County Official Plan (GCOP) as partially outside an Aggregate Resource Area as well as partially within the County's Natural Heritage System Core Area therefore, an official plan amendment is required for the subject proposal.
4) The following studies/reports, prepared by qualified individuals, shall be provided to support applications for new or expanded pits or quarries.	

These studies/reports shall meet the requirements of the Planning Act, Provincial Policy Statement, Niagara Escarpment Plan (if within the Niagara Escarpment Plan area), County Official Plan, and municipal Official Plans (where applicable): (in part)	As part of this submission, a copy of all ARA license application materials has been provided to the County of Grey and Township of Southgate. These materials are substantially comprised of the same materials that are required as part of the *Planning Act* complete application requirements, save and except for the Township requirement for the completion of a TIS.
a) Submission of copies of all documentation provided to the Ministry of Natural Resources and Forestry as required for licensing, pursuant to the Aggregate Resources Act;	
b) A planning report prepared by a Registered Professional Planner, addressing the requirements of the Planning Act, Provincial Policy Statement, Niagara Escarpment Plan (if within the Niagara Escarpment Plan area), County Official Plan, and municipal Official Plans (where applicable);	This Statement includes planning analysis which has taken into consideration matters of provincial interest as identified in Section 12 of the ARA, Section 2 of the *Planning Act* and subsequently within the *Provincial Policy Statement*. In addition to matters of provincial interest, relevant upper tier and lower tier policy is reviewed in this Table and the following Table.
c) A noise impact study in accordance with the Aggregate Resources of Ontario: Provincial Standards;	A noise impact assessment has not been required of the subject ARA license application as the closest receptor (residence) is located approximately 700 metres from the Site.
d) A Traffic Impact Study and/or road assessment, unless otherwise waived at the discretion of municipal, County, or Provincial road authorities, based on the amount of traffic involved, or the existing construction of the haul route roads;	A TIS was completed for the proposal which considered existing conditions along the haul route as well as potential impacts to the road network with additional truck traffic stemming from proposed gravel pit. The TIS concluded that no remedial measures along the haulage route or at any of its intersections, would be required by the proposed use. For additional information in this regard, please refer to Section 1.1.2 of this Statement.

e) For mineral aggregate operations proposing to remain above the established water table level as identified in the Aggregate Resources of Ontario: Provincial Standards, a letter of opinion shall be provided by a qualified individual estimating the current water table level, determining whether the proposed operation will have any impacts to the quality or quantity of the surface or groundwater resources, as well as how any impacts relate to natural areas, features and systems;	GSS was retained to complete the Hydrogeological Assessment required as part of the ARA and *Planning Act* complete application materials. The Hydrogeological Assessment determined the groundwater and surface water flow to be in a south to north direction at the Site with the maximum predicted water table measured at the Site ranging from 492.2 masl (south) to 490.1 masl (north). The maximum depth of extraction has therefore been established at 495 masl in the south end of the Site and 491.5 masl at the north end of the Site. As there are no water supply wells within 500 metres of the Site, no direct effects of groundwater resources are expected from the proposal. With respect to hydraulic connectivity between groundwater and surface water resources at and near the Site, GSS determined that the proposed area of extraction would be a very minor contributor to the water supply of the PSWs and no potential for the pit to negatively affect the water levels in the PSWs was identified. The Hydrogeological Assessment has recommended a monitoring program which has been added to the Operational Plan notes and outlined in detail in Section 3.5 of this Statement.

g) An environmental impact study, however a Level 2 – Natural Environment Report required under the Aggregate Resources Act can act as a substitute for an environmental impact study. Where there are discrepancies between the terms of reference for a Natural Environment Report or an environmental impact study, as defined by this Plan, the more protective study requirements shall be considered applicable;	A NETR dated February 2022 was prepared by SAAR as part of the ARA and *Planning Act* application requirements. As noted previously, the Site has been identified in the GCOP as being within a Core Area of the County's Natural Heritage System, reflecting the on-site wetlands, woodlands and esker features. Following field surveys conducted in 2020/2021, the relevant natural heritage features were assessed using the applicable policy and guidelines to establish if the quantity, quality and type of nature confirmed at or near the Site met thresholds established for provincial significance. SAAR also conducted a review of the extent of provincially significant wetlands (PSWs) at the Site which resulted in a refinement of the mapped boundaries of the PSWs which has been reflected on the ARA Site Plans. The natural heritage review by SAAR confirmed the following natural heritage features on or near the Site; *significant wetlands (Keldon Swamp Wetland Complex)* *fish habitat* *significant woodlands* *significant wildlife* *significant area of natural and scientific interest ((ANSI) Keldon Esker)* The NETR has concluded that extraction of a portion of the esker can occur, without negative impact, provided recommended setbacks and mitigation are implemented at

	the Site and maintained during the lifespan of the operation. Biennial monitoring for interior forest breeding birds and wetland vegetation during the lifespan of the pit has also been recommended. Rehabilitation of the Site will require the northern portion of the Site to be reforested to create a wildlife corridor between the east and west PSWs. This wildlife linkage will also include plantings to bolster the wet meadow west of the Site and the edge of the PSW east of the Site. Details related to the required planting plan as well as other recommendations from the NETR have been included in the Rehabilitation Plan site plan notes and detailed in Section 3.3 of this Statement. In addition to the NETR, GSS provided a technical memorandum to staff of the Ministry of Natural Resources and Forestry (MNRF) dated February 27th, 2020 (appended to the Hydrogeological Assessment), reviewing the rationale for designating the portion of Keldon Esker located at the Site as a provincially significant ANSI in consideration of its value as a mineral resource. As noted previously in this Statement, ARIP 51 states that the Keldon and Egerton Eskers constitute the only source of crushable aggregate in the Township (former Proton Township) and represent an important local resource. An increase in overall wildlife habitat and biodiversity on-site will serve to offset any

h) An archaeological assessment prepared by a qualified individual;	impacts to the ANSI feature and make available the valuable mineral deposit. For additional details in this regard, please see Section 3.3.1 of this Statement. Scarlett Janasus Archaeology Inc. was retained by the applicant, to complete a Stage 1 and Stage 2 Archaeological Assessment (Assessment) at the Site as required by the Provincial Standards and the PPS. Field work was conducted at the Site in good weather conditions on October 18, 21 and 24, 2019. Approximately 39% of the Site was test-pitted as the remainder of the Site (61%) contained steep slopes or had been previously disturbed. The investigation determined that the area intended for extraction did not contain any item of cultural or archaeological significance. The Assessment was submitted to the province with a letter of acceptance from MTSC received in November of 2019. For additional information please refer to Section 3.4 of this Statement.
j) A progressive rehabilitation plan, including the use of maximum disturbed area provisions where feasible.	Progressive rehabilitation has been outlined on the associated ARA Site Plans submitted alongside this Statement. As the area slated for extraction is only 5.77 hectares in area, identifying a maximum disturbed area is not necessary for this proposal.
7) New pits or quarries are not permitted within Core Areas on Schedule C to this	As noted previously, a portion of the area proposed for gravel extraction is

*Plan, except via amendment to this Plan. New pits or quarries may be permitted within Linkages identified on Schedule C, provided the rehabilitation plan restores the Linkage. Expansions to existing pits or quarries can be considered in Core Areas or Linkages, subject to meeting all applicable policies of this Plan***.**	designated as within a Core Area of the County's Natural Heritage System and as such, an amendment to the GCOP is required. A review of the NETR findings and recommendations related to natural heritage features on or near the Site has been summarized in Section 3.3 of this Statement.
5.6.5 Mineral Resource Extraction Development Criteria Policies (in part)	
1) Where an applicant wishes to undertake a sand and/or gravel or quarry operation other than a wayside pit and quarry, the local municipality or the County of Grey, may require the applicant to enter into a development agreement with the municipality or the County. The agreement shall be entered into prior to local Council's enactment of the implementing zoning by-law amendment, or as a condition of a holding 'h' symbol in the by-law. *Such an agreement may include:* *a) Capital arrangements regarding improvements beyond the boundary of the applicant's land, as they may be required by reason of the operation of that extractive industry, e.g. widening and improving roads; and* *b) Routes to be used by trucks carrying aggregate.* *Information should be provided by the applicant identifying the proposed haul route, estimating the average number of trucks per day, the potential impacts to traffic and road conditions on the proposed haul route, as well as a cost estimate for any necessary upgrades required to the proposed haul route. Where the haul route has existing deficiencies and has existing traffic, cost-sharing will be considered between the*	The Township has required the completion of a Traffic Impact Study (TIS) and any recommendations stemming from the TIS be implemented via a haul route agreement between the applicant and the Township. As noted previously in this Statement, the main haulage route proposed for the operation is east on Southgate Road 4 to Grey Road 8 and then south to Provincial Highway 89. Paradigm Transportation Solutions Limited (Paradigm) was retained by the applicant to complete the required TIS. The TIS included an assessment of the current traffic and site conditions along the proposed haulage route and provided estimates of background traffic growth as well as estimates of additional traffic generated by the new gravel pit use. The TIS considered the requested annual tonnage, the type of trucks to be used by the operation as well as the expected yearly (240 days) and daily (11-hour) full capacity operations. The TIS concluded that the study area road network, including intersections, will continue to operations within acceptable levels of service with no problem

applicant and the road authority. Costs to upgrade the haul road that are directly attributable to the proposed extractive operation, (for example, but not limited to, turning lanes into or out of the extractive operation, or climbing lanes on steep hills) shall be the responsibility of the applicant and will be based on use of the haul route.	movements during AM and PM peak hours. The TIS determined that no off-site transportation improvements are required as part of the proposal. An agreement between the operator and the Township of Southgate, defining the haul route, may still form a requirement at the discretion of the Township.
2) Access to pit or quarry operations shall be from a public road that is of a construction and standard to service the traffic associated with the use. Haul routes should be identified to minimize the impact of truck traffic on residential uses and avoid existing settlement areas where practically feasible. (in part)	The pit entrance will be located on Southgate Road 4 which the TIS has determined is adequately constructed for the proposed use. Residential uses along the haul route are minimal in number.
3) All pit and quarry operations shall comply with the Aggregate Resources Act and its most current regulations.	It is the responsibility of provincial staff at the MNDMRF and its sister Ministries to review and regulate an aggregate operation's compliance with the ARA, the associated Provincial Standards and all other relevant provincial legislation. These requirements will be included on the approved ARA Site Plans which, in turn, form part of the license.
4) All pit and quarry operations shall satisfy the legal requirements of the Ministry of the Environment, Conservation and Parks or the authority having jurisdiction over water supply, disposal of liquid wastes, and the control of air pollution.	Re-fueling of equipment will occur primarily via fuel trucks attending on the Site. A Spills Contingency Plan has been included on the associated ARA Site Plans in accordance with the legislated requirements. Potential impacts related to water resources and dust (air) have been outlined in Sections 3.5 and 3.6 of this Statement.

	No de-watering or washing of product will occur at the Site.
12)Where it is not feasible to return the lands to agriculture, priority should be given to assessing the feasibility of rehabilitation to a use that provides social and environmental benefits, and that is compatible with surrounding land use types. The use should result in environmental improvement or net environmental gain. Features such as woodlands, wetlands, fish and wildlife habitat areas, integrated water systems, or passive recreational opportunities may be appropriate	It intended for the Site to be rehabilitated to a naturalized state with the potential for a recreational use in the southern section of the Site. As noted previously in this Statement, the northern portion of the Site will be reforested to create a wildlife corridor/linkage between the east and west PSWs. The corridor shall extend a minimum of 200 m from the northern property line and will result in an overall gain of biodiversity at the Site. Additional details related to the rehabilitation of the Site can be found in Sections 1.1.3 and 3.3 of this Statement and on the associated Rehabilitation Plan (ARA Site Plans).

4.2 Township of Southgate Official Plan Analysis

Policy	Evaluation
5.6 Mineral Aggregate Extraction **5.6.2 Development Policies**	
1. New sites to be designated Mineral Aggregate Extraction will require an amendment to this Plan and the County of Grey Official Plan.	As noted previously in this Statement, both upper tier and lower tier official plan amendments are required by the subject application.
2. An applicant who wishes to undertake an extractive operation other than wayside pit and quarry, must enter into a Development Agreement with the local municipality. The Agreement shall be	As noted previously in this Statement, a TIS was completed as part of the complete application requirements and as

entered into prior to local Council's enactment of the implementing Zoning By-law Amendment. *3. Such an agreement may include:* *i. Capital arrangements regarding improvements beyond the boundary of the applicant's land, as they may be required by reason of the operation of that extractive industry (e.g. improving roads and road widening); and,* *ii. Routes to be used by trucks carrying aggregates.*	directed by Township of Southgate planning staff. The TIS did not identify any necessary road improvements along the haulage route, taking into consideration both current and future traffic conditions. Should the Township wish to formally define the haul route to be used by the trucks stemming from the proposed pit, a development agreement may be entered into between the operator and the Township.
4. All pit and quarry operations shall comply with the Aggregate Resources Act and its regulations as amended from time to time.	As noted previously in this Statement, staff of the MNDMRF, collectively with other relevant provincial Ministries, are responsible for ensuring aggregate operations, whether newly proposed or active, follow all applicable regulations. The ARA licensing process requires several supporting studies (NETR, Hydrogeological Assessment, etc.), the recommendations of which are added to the Site Plans which are tied to the license. This process ensures both the ARA and the *Planning Act* requirements are met during and after licensing of the operation.
5. All pit and quarry uses shall satisfy the legal requirements of the Ministry of Environment or the authority having jurisdiction as to water supply and disposal of liquid wastes	As noted previously in this Statement, no de-watering is to occur at the Site and no impacts related to groundwater resources, including domestic water supplies, are expected as extraction is to occur above the maximum predicted water table. There will be no washing of product at the Site. While fuel storage will occur at the Site in accordance with legislated requirements,

	it is expected that most re-fueling will occur via fuel trucks attending on site. For additional information in this regard, please refer to the associated Operational Plan.
6. All pit and quarry uses shall satisfy the legal requirements of the Ministry of Environment, Air Management Branch, as to the control of air pollution.	As noted in Section 3.6 of this Statement, dust will be controlled on site using water or another provincially approved dust suppressant on the internal laneway and stock-piled materials as necessary. As the closest house is well over 500 metres away, negative impacts related to dust are not expected from the Site.
7. When an extractive area has been depleted and is rehabilitated in accordance with the Licence, an Official Plan Amendment will be required for any use not permitted in Section 5.6.1 above.	Following rehabilitation, the Site is proposed for a recreational use within a naturalized setting which will require amendments to the Township Official Plan and Comprehensive Zoning By-law. Through the creation of a 200 m wide wildlife corridor in the north section of the Site, a net gain of biodiversity at the Site is expected.
5.6.3 Policies for the creation of new Mineral Aggregate Extraction designations	
1. An Amendment to this Plan and the County of Grey Official Plan shall be required. *Application to amend this Plan shall include the following studies:* *i. Copies of all documentation provided to the Ministry of Natural Resources as required for licensing, pursuant to the Aggregate Resources Act.* *ii. A hydrogeological study that demonstrates that the washing and screening operations or other operations*	As per the requirements of the Township Official Plan, the complete license application materials have been included as part of the *Planning Act* application submission, including the Hydrogeological Assessment by GSS which forms part of the licensing requirements under the ARA. The Hydrogeological Assessment reviewed the potential impacts of the proposed operation on both surface and groundwater resources at or near the site,

on site will not have an adverse impact on the areas surface flow, groundwater and area wells.	including potential impact on drinking water supplies. It was determined that no impacts on these resources from the proposal can be reasonably expected given the fact that extraction will remain above the maximum predicted water table and there will be no dewatering activities on site. A groundwater monitoring program has been added to the Operational Plan to ensure the required separation distance (1.5 m) between the pit floor elevation and the water table elevation is maintained during operations.
iii. A traffic study in keeping with Section 9.1 demonstrating that no adverse traffic impacts will result from the aggregate carrying vehicles during the operation of the pit or quarry.	As outlined in Section 1.1.3 of this Statement, the required TIS concluded that no adverse impact to the operations along the haul route and its intersections is expected during the operation of the pit. The TIS has not recommended any associated remedial measures.
iv. An environmental engineering study demonstrating the effects on the surrounding area in terms of air quality through dust and particulate emissions and the potential for noise and vibration levels and quality and quantity of surface water and ground water resources.	Dust is to be mitigated on site as per the ARA Provincial Standards using either water or another provincially approved dust suppressant. As there are no residences within 500 m of the Site, off-site impacts related to dust are not expected. Neither a noise nor vibration study forms a requirement of the ARA application as the nearest sensitive receptor is over 500 m away and no blasting will occur at the Site.

v. The Site Rehabilitation Plan.	The Rehabilitation Plan has been included as of the *Planning Act* application materials. For additional information, please refer to Section 1.1.3 of this Statement.
2. Upon completion of site rehabilitation, the owner shall be required to amend this Plan, and the County of Grey Official, in order to appropriately re-designate the lands. (in part)	Final rehabilitation of the Site will form a 200 m wide wildlife corridor in the north portion of the Site, linking the two on-site PSWs. This linkage will result in a net gain of biodiversity at the Site. A recreational use is proposed for the southern portion of the Site and will require amendments to the Township Official Plan and Comprehensive Zoning By-law.

5.0 SUMMARY STATEMENT REQUIREMENTS: REFERENCE TABLE

Aggregate Resources of Ontario: Technical Reports and Information Standards **Part 1.0: Summary Statement Applicable Requirements**	
1.1 (In part) The agricultural classification of the proposed sit.	See Section 3.2 of this Statement
1.2 (In part) Applicable planning and land use considerations	See Sections 3 & 4 of this Statement
1.3 (In part) Applicable *Clean Water Act* considerations	See Section 3.5.1 of this Statement
1.4 (In part) Quality and Quantity of Aggregate On-Site	See Section 3.1 of this Statement
1.5 (In part) Main Haulage Route and Proposed Truck traffic	See Section 1.1.2 of this Statement
1.6 (In part) Progressive and Final Rehabilitation and Suitability of End Use	See Section 1.1.3 of this Statement

6.0 CONCLUSIONS

A new Class A license is required to permit the proposed Hog's Back pit. The ARA and *Planning Act* applications are supported by this Summary Statement and Planning Analysis in conjunction with the ARA Site Plans, ARA License Application, and the associated technical reports and related requirements.

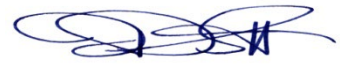
Based on the foregoing, the following is concluded:

- A marketable aggregate resource deposit is present at the Site. This deposit is anticipated to be suitable for a variety of construction uses based on the available background reporting.
- Natural heritage resources will not be significantly affected by the proposal. Significant habitat features have been adequately mitigated from pit operations by means of setbacks and operational controls. A robust rehabilitation plan will ensure that the end use of the Site is more ecologically productive than its present condition which serves as a counterbalance to the reduction in the esker formation.
- The proposed pit is not anticipated to impact any cultural heritage features. All regulations involving the applicable cultural heritage legislation will be followed in the event that a cultural heritage feature is identified.
- Ground water quality and surface water quality will not be significantly impacted by the operation in consideration of the water monitoring controls proposed as part of pit operations, the size of the proposal and the distance from any well used for domestic water supply.
- Off-site impacts related to noise and dust are not expected from this proposal as the closest residence is approximately 700 metres from the Site.
- An agreement can be entered into between the operator and the Township which identifies the proposed operations haulage route.
- The proposed pit is an appropriate use of land in this rural area of Grey County.

Respectfully submitted,

Prepared by Genevieve Scott

Cuesta Planning Consultants Inc.



Approved by Don Scott

Cuesta Planning Consultants Inc.

APPENDIX A

Ministry of Heritage, Sport, Tourism, Culture Industries

Archaeology Program Unit
Programs and Services Branch
Culture Division
401 Bay Street, Suite 1700
Toronto ON M7A 0A7
Archaeology@ontario.ca

Ministère des Industries du patrimoine, du sport, du tourisme et de la culture

Unité des programme d'archéologie
Direction des programmes et des services
Division de culture
401, rue Bay, bureau 1700
Toronto ON M7A 0A7
Archaeology@ontario.ca

Ontario

Nov 12, 2019

Scarlett Janusas (P027)
Scarlett Janusas Archaeology Inc.
PO BOX none Tobermory ON N0H 2R0

RE: Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "STAGE 1 AND 2 ARCHAEOLOGICAL ASSESSMENT GRAVEL PIT EXPANSION, 046365 SOUTHGATE ROAD 04 PART LOT 31, CONCESSION 3 FORMER TOWNSHIP OF PROTON MUNICIPALITY OF SOUTHGATE, GREY COUNTY ORIGINAL REPORT ", Dated Oct 30, 2019, Filed with MTCS Toronto Office on N/A, MTCS Project Information Form Number P027-0391-2019, MTCS File Number 0011582

Dear Ms. Janusas:

The above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18, has been entered into the Ontario Public Register of Archaeological Reports without technical review.[1]

Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require further information, please do not hesitate to send your inquiry to Archaeology@Ontario.ca

cc. Archaeology Licensing Officer
Randy Bye,H. Bye Construction Limited
Jason McLay,MNRF

1*In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.*

APPENDIX B

W. BRAD BENSON, P.Eng.

SENIOR HYDROGEOLOGIST January 2020

PROFILE

Professional engineer (civil) and hydrogeologist with twenty-eight (28) years of experience as an environmental consultant. Wide variety of experience including both physical and contaminant hydrogeology. Responsible for project management and technical analysis/review of projects that included well drilling and well development, groundwater quality and quantity evaluation and protection, contaminant migration, assessment of groundwater and surface water interaction, environmental monitoring, and industrial site characterization and remediation. Project sites have included gravel pits, quarries, municipal and industrial landfill sites, manufacturing plants, petrochemical facilities, oil refineries, railway yards, airports, fuel storage and handling facilities, residential developments, golf courses, and urban sites for infrastructure renewal/upgrades.

EDUCATION

M.A.Sc., Civil Engineering, University of Waterloo	1990
B.A.Sc., Civil Engineering, University of Waterloo	1984

CAREER

Senior Hydrogeologist, GSS Engineering Consultants Ltd., Owen Sound, ON	Jan 2016 – Present
Senior Hydrogeologist, Coffey Geotechnics Inc., Toronto, ON	2012 – 2014
Senior Hydrogeologist, GENIVAR Inc. (formerly Henderson Paddon & Associates Limited), Owen Sound, ON	2007 – 2012
Associate, Golder Associates Ltd., London, ON	1995 – 2007
Hydrogeologist, Golder Associates Ltd., London, ON	1990 – 1995
Project Engineer, Atlas Dewatering, Toronto, ON	1986 – 1987
Technical Sales, Bedrock Resources Inc., Cambridge, ON	1985 – 1986

PROJECT EXPERIENCE

A summary of both recent and key projects for work undertaken as a project manager and/or technical specialist is provided below.

Hydrogeological Assessments

- Permit to Take Water applications for water supply or dewatering during construction/operation of municipal infrastructure (e.g., sewers, watermains, pumping stations) and aggregate extraction, including:
  - Operating quarries, South Bruce Peninsula and Township of Georgian Bluffs (2018/19);
  - Durham municipal water supply wells, Municipality of West Grey (2016);
  - Kennedy Road 1500-mm diameter trunk watermain tunnel, York Region (2014);
  - West Richmond Hill pumping station and watermains, York Region (2013, 2014);
  - Mid-Halton WWTP effluent sewer tunnel and outfall, Halton Region (2014);
  - Maple Street reconstruction, City of Niagara Falls (2014);
  - CSO Tank Upgrades, North Toronto WWTP, City of Toronto (2013);
  - Scholfield Avenue groundwater pumping station, City of Port Colborne (2012);
  - Sanitary sewer systems and pumping stations, Teeswater and Formosa, Municipality of South Bruce (2012);
  - Lord Elgin Estates Developments Ltd., Port Elgin (2011, 2012);
  - 7th Avenue trunk sanitary sewer, Town of Hanover (2010);
  - Sanitary sewage pumping stations, Municipality of Arran-Elderslie (2010) and Town of Saugeen Shores (2008).
- Assessments under the Aggregate Resources Act for existing and proposed gravel pits and quarries in Bruce, Grey, Essex, Norfolk, Haldimand, and Middlesex Counties.
- Upgrades to sewage system for long-term care facility in accordance with MECP Design Guidelines for Large Subsurface Sewage Disposal Systems, Township of Chatsworth (2017).

Groundwater Resource Evaluation

- Technical peer review of private well capacity testing for residential subdivision, County of Brant (2012 – 2014).
- Annual monitoring reports for effects-based monitoring of municipal water supply system, Town of South Bruce Peninsula (2009 – 2010).
- Technical peer review of Tier 1 and Tier 2 water budget assessments for Saugeen, Grey Sauble, Northern Bruce Peninsula Source Protection Region (2009 – 2010).
- Groundwater technical studies carried out under the provincial source water protection program for municipal water supply systems, Township of Chatsworth and Municipality of Arran-Elderslie (2007 – 2009).
- Evaluation of groundwater potentially under the direct influence of surface water for: Durham municipal well, West Grey (2019 – 2020); municipal water supply, Kilworth/Komoka and City of London (2004 – 2005); condominium development, Bayfield (2005).

Environmental Monitoring and Assessments

- Environmental monitoring of groundwater, surface water, and soil vapour at former industrial site in accordance with approved risk management plan, City of Orillia (2012 – 2014).

- Annual monitoring reports for active and closed municipal and industrial landfill sites:
  - County of Simcoe (2007 – 2011);
  - City of Owen Sound (2007 – 2011);
  - Municipality of Arran-Elderslie (2007 – 2011);
  - Town of Hanover (2010 – 2011);
  - Waste Management Canada, Sarnia (1991 – 2001).
- Assessment of potential landfill-related impacts on proposed and existing developments in accordance with MECP Guideline D-4, Grey and Simcoe Counties (2007 – 2012).
- Monitoring and investigation of groundwater quality at brine storage facilities:
  - BP Canada Energy Company, Sarnia and Windsor, ON and St. Clair, MI (1991 – 2006);
  - NOVA Chemicals, Corunna, ON.

Environmental Site Assessments and Remediation

- Phase 1 and 2 ESAs and environmental characterization for numerous sites, including manufacturing plants, petrochemical production facilities (Sarnia, ON), fuel handling facilities, railway yards (London, St. Thomas, Windsor, Stratford, ON), former landfill sites, military base (London, ON), federal airports, and a solvent recycling facility (Elmira, ON).
- Environmental investigation, remediation assessment, and technical review for proposed residential redevelopment of former industrial lands and municipal landfill, City of London (2006 – 2012).
- Remediation/management of environmental impacts to soil and groundwater at numerous sites including removal of underground storage tanks and building demolition. Projects included:
  - Monitoring for identification, removal, and waste management of petroleum-impacted soil in municipal sewer excavation, Owen Sound (2011);
  - Monitoring of soil remediation at former retail fuel facility located in Wellhead Protection Area for planned redevelopment, Dundalk (2011);
  - Environmental remediation, petroleum pipeline pump station, London, ON (2004 – 2005);
  - Investigation, risk assessment, and excavation monitoring, Western Fair Association, London, ON (2003 – 2004);
  - Environmental characterization, remediation and monitoring of former landfill re-purposed as municipal park, City of Sarnia (1992 – 2003).
- Decommissioning of wastewater impoundments and rehabilitation of stormwater management pond at automobile assembly plant, Ford Motor Company of Canada, St. Thomas, ON (1998).

Surface Water Assessments

- Permit to Take Water applications for irrigation water supply and for temporary diversions of watercourses.
- Applications for industrial sewage works under Section 53 of the OWRA.
- Stormwater control study, NOVA Chemicals, Sarnia, ON (2006).

PROFESSIONAL PROFILE

Genevieve Carolyne Ashleigh Scott, B.A. (Hon.)
Planner, Cuesta Planning Consultants Inc.

EDUCATION & PROFESSIONAL ACCREDITATIONS

- **Bachelor of Arts Honours Geography**, Queen's University, Kingston, Ontario
- Candidate member of the Ontario Professional Planners Institute (OPPI)
- Candidate member of Canadian Institute of Planners (CIP)

PROFESSIONAL EXPERIENCE

2005 to Present	**Land Use Planner**, Cuesta Planning Consultants Inc.
1999-2002	**Assistant Municipal Advisor**, Ministry of Municipal Affairs and Housing.

PROFESSIONAL EXPERIENCE SUMMARY

Ms. Scott is a graduate of Queen's University, Bachelor of Arts, Honours Geography Program. Her focus was in land use and municipal planning, as well as social geography. Through this program Ms. Scott has developed a sound understanding of environmental issues in planning.

Prior to her work with Cuesta Planning Consultants Inc., Ms. Scott was employed by the Ministry of Municipal Affairs and Housing (MMAH), where she was involved in providing advice and training to municipal officials with regard to municipal finance, economic development, relevant provincial legislation as well as land use planning processes.

While Cuesta Planning Consultants Inc. is involved in a broad range of planning projects, Genevieve has specialized knowledge related to rural land use planning and resource development issues.

As an employee of Cuesta Planning Consultants Inc., her primary responsibilities include;

- Review and consolidation of relevant policy and professional commentary/opinion;
- Report preparation including policy analysis and technical materials review;
- Processing all types of applications under the Planning Act and Aggregate Resources Act

- Official Plan and Zoning By-law preparation;
- Project management and client relations;
- Attendance and participation in Public Hearings;
- Mediation and consultation with approval authorities, review agencies and First Nations groups.

Genevieve has been responsible for preparing witness materials and has been previously qualified as an expert witness before the Ontario Municipal Board, the Local Planning Appeal Tribunal and the Ontario Land Tribunal.

SAMPLES OF RELEVANT COMPLETED & CURRENT PROJECTS

• Pruder Quarry, Town of South Bruce Peninsula
• Bruce Peninsula Stone, Amabel Quarry, Town of South Bruce Peninsula
• Young Quarry, Township of Georgian Bluffs
• H. Bye Construction Ltd., Aitken Pit, Township of Southgate
• H. Bye Construction Ltd., Flanagan Pit & Expansion, Township of Southgate
• H. Bye Construction Ltd., Rocky Sideroad Pit, Township of Southgate
• H. Bye Construction Ltd., Ghent Pit, Township of Wellington North
• Gott Pit, Municipality of Grey Highlands
• Weber-Stack Pit, Township of Wellington North
• Alliston Pit, Nelson Aggregates, Township of Adjala-Tosorontio
• Bumstead Pit, Township of Chatsworth
• Canadian Bedrock Quarry,Town of South Bruce Peninsula
• McLaughlin Farms, Sibio Pit, Municipality of West Grey
• Bruce Peninsula Stone, Bury Road Quarry, Municipality of Grey Highlands
• Forbes Sand & Gravel Quarry Expansion, Township of Georgian Bluffs

CURRICULUM VITAE

LINDA LIISA SÕBER, H.B.Sc.

EDUCATION

H.B.Sc. Biology, York University 1987
(Honors Thesis Circa-Lunar Rhythms and Animal Behavior)

EMPLOYMENT

2017 - present Biologist, SAAR Environmental Limited
2014 - 2016 Biologist, SPL/WSP
1991 - 2014 Biologist, SAAR Environmental Limited
1987 - 1991 Biologist, Former Ministry of Natural Resources (MNR)

EXPERIENCE

Public Sector projects include conducting and authoring field research to inform harvest limits and environmental constraint areas, reviewing land use applications and participating in district-wide life science inventory program.

Similar work in the private sector with SAAR Environmental Limited includes conducting and reviewing environmental impact assessments, some with applied research components, providing testimony on field biology and environmental policy before tribunals including Ontario Municipal Board (O.M.B.,L.P.A.T.), Provincial Court, Ontario Environmental Review Tribunal (E.R.T.), Section 28 Hearing at Conservation Authorities, Niagara Escarpment Commission Board.

Special projects for the Province include researching and testing significant woodland criteria at Maple MNR for pilot municipalities (Halton, Brampton); selecting vegetation sample locations of marsh, fen, swamp and bog wetlands for MNR and Lakehead University to standardize vegetation descriptions for abundance measurement tools.

CERTIFICATIONS AND CONFERENCE PRESENTATIONS

Provincial Wetland Evaluator
Provincial Lake Surveyor
Floodplain Surveyor, MNR Engineering
Fur Harvest and Management Course MNR, Georgian College
Rare Species Workshop Presenter, MNR, Muskoka Field Naturalists
Cyperaceae Workshop Participant, University of Guelph
Rare Species Training, Eastern Massasauga Rattlesnake (EMR), Province of Ontario
Biodiversity, Latornell Conservation Symposium
World Wind Energy Conference, Saugeen Ojibway Nation (SON). Wildlife Monitoring
Ontario Sand and Gravel Annual Meeting Presenting on Wildlife Cores and Corridors and Snake Wintering Habitat
Integrated Ecological Parameters into Provincial Timber Management Plan (Deugo, Sober)
Principal Author, Environmental Study Guidelines (For SON Joint Council)
Municipal Workshops Presenting Environmental Study Guidelines

SELECTED PROJECTS

Lake Trout Winter Mortality Experiment, MNR. 1988. Designing tether apparatus and 24-hour monitoring period for sample size (final n=96) of angled lake trout in the Parry Sound winter fishery by catch-release to inform harvest regulation. Data analysis included non-parametric statistical analysis using Statistical Analysis System (SAS).

Red-shouldered Hawk Nest Surveys, MNR. 1988-89. Timber Management Plan areas incorporated the integrated ecological management in the form of restricted tree clearing zones and modified management areas (MMA (modified management areas) to nests discovered by Sober, L.L. and N. Shaw.

Walleye Egg Bioassay, MNR. 1990. Built incubators to hold 'milked' eggs, suspended into Shawanaga River to replicate spawning habitat, seeking to isolate variables causing observed young of the year recruitment failure of walleye. Collaboration with academic team and Chief Roger Jones at Shawanaga First Nations Reserve isolated possible phytoplankton food shortage.

Provincial Wetland Evaluation Reviews, MNR. 1993. Seconded from SAAR to update 155 Provincial Wetland Evaluations for MNR, including hydrology scoring. Sober/R.L. Bowles conducted specific life science inventory for Mud Lake PSW (Midhurst MNR, 1991); SAAR later evaluation on extensive Oak Lake wetland complex (Bancroft MNR, 1996).

Secondary Plan, Snow Valley Planning Association. 1993-94. SAAR inventory of 1700 hectare plan area informed the Township of Springwater Secondary Plan for Snow Valley. Study updated limits of provincially significant wetland (Minesing Swamp), Area of Natural and Scientific Interest (ANSI), identified groundwater seeps from ancient Lake Algonquin shorecliffs, rare flora, mapped cores, corridors and links.

Significant Woodland Criteria, MNR. 1995. Secondment from SAAR to join technical team researching and testing criteria to value woodlands, including size standards.

Restoration Plan, Duntroon Quarry. 1996. Seeley & Arnill. Restoration efforts were recommended for awards.

Carden Alvar Plain, Orillia Area. Natural Environment Technical Reports. 1998. Fowlers. Aggregate report included alvar habitat creation recommendations for Rehabilitation Plan.

Life Science Inventory. **Muskoka Heritage Areas Program**. 1999 - 2000. MNR secondment for district-wide greenspace inventory including research, news publication updates and field crew.

Environmental Impact Study (EIS) Peer Review. ANSI Incursion. County of Grey. 2000. SAAR audited EIS work for a proposed golf course, added natural heritage criteria. Rocky Saugeen ANSI limit was refined and re-zoned.

EIS. Bruce Peninsula. 2000 - 2020. Numerous projects include identification of rare species including Purple-stemmed Cliffbrake, Hill's Thistle, Round-leaved Ragwort and EMR; mitigating development impacts through constraint and stewardship.

EIS. Oviinbyrd Proposed Golf Course. 2003. Earlier work on EMR included this project and many others on the Precambrian Shield. Seasonal wildlife inventories confirmed EMR. Field research during the surveys confirmed maximum EMR movement from foraging and basking habitat was 82 metres.

EIS and Secondary Plan Policy. Cobble Beach. 2004 - 2007. Seasonal inventories were conducted on 584 acres in Sarawak, Township of Georgian Bluffs. SAAR contributed to the Cobble Beach Secondary Plan policy language, conditions and environmental guidelines.

ANSI. Big East River. Ontario Parks. 2005. Sober/Bowles, R.L. conducted a life science inventory along the 55km length of the Big East River, from Algonquin Park origin to outflow into Lake Vernon. Life science inventory included herpetofauna, insects such as damsel- and dragonflies, avifauna, small and large mammals, aquatic and terrestrial plants and fungi. The extent of the ANSI was ground truthed. Conservation habitats were highlighted to inform Parks land management decisions including expanding timber tract licenses.

Natural Heritage System Background Paper, City of Owen Sound. 2005. SAAR provided a review of the greenspace forested core and corridor areas for a background planning study to inform the City of Owen Sound Official Plan.

EMR Critical Habitat. 2005. Highway 69 Re-alignment Options Ground Truthed for EMR and refined. Sober/Bowles,R.L. for MMM Limited.

O.M.B. ANSI Incursion. 2007. Testimony for Township of Essa; incompatibility of paintball activity in ANSI with interior forest ground nesting birds.

Field Audits and Monitor Training. SON. 2008 - 2012. Infrastructure review included Cypress Park expansion, Bruce Nuclear Power Plant Deep Dig, Hydro Electric Expansion Corridor, Shoreline Development, highway improvements, windfarms, with testimony where required. Training environmental monitors included rare species surveys, vetted and shared with Bruce Peninsula botanical expert. Rarities included Hill's Thistle, then-rare Dwarf Lake Iris, EMR. Monitors assisted auditing habitat including alvar.

O.M.B. **Grey County**. 2010. Castle Glen Resort Residential Land Use. Peer Review testimony included field audits of rare species and interpretation of pertinent Niagara Escarpment Plan (NEP) and Official Plan policies on wetland. Mediation resulted in refining development setbacks for Butternut, Hart's-Tongue fern and interior forest.

O.M.B. Wildflower Properties Corporation, Municipality of North Bruce Peninsula. 2010. Testimony included input to subdivision agreement conditions for a Lake Huron location. Conditions included a Vegetation and Natural Areas Retention Plan and stewardship brochure to inform landowners of the constraint zones of alvar, fen, EMR critical habitat, fish spawning zones and more.

O.M.B. Simcoe County. 2010. Review of Big Bay Point Resort Recreational Community. SAAR testimony included interior forest analysis and mapping environmental constraints (*e.g*. rare turtle) for mediation. The concept plan was refined, and monitoring programs were agreed upon for the ultimate settlement.

SON Environmental Monitor Participation, Audit of Ecology. 2010. Field audit of Town of South Bruce Peninsula project involved rare species survey for SON to inform road improvements. Hill's Thistle and Dwarf Lake Iris were located and flagged to safeguard habitat at the road right-of-way overlap.

EIS in ANSI. Dwarf Lake Iris and Hill's Thistle Mitigation. 2012. Town of South Bruce Peninsula. Approved OPA guides subdivision development near Howdenvale through SAAR EIS recommendations on constraint areas, siting of building envelopes and a Vegetation Management Plan.

O.M.B. Yonge Ridge Homeowners Association. 2016. Interpretation of Provincial Policy Statement (PPS) natural heritage and Toronto Region Conservation Authority policies. Peer review testimony of a proposed condominium included testing PPS natural heritage policies relative to the observed ecology of the site *vs*. condominium height and encroachment into slope.

Natural Environment Technical Report. **Arsenault Quarry.** 2017 - 2018. WSP/SAAR. Incorporation of traditional knowledge in Rehabilitation Plan. Landowner liaison included agreement with SON elders on site for continued access to lands for seasonal harvest, and future potential for innovative partnering projects with SON.

ERT. Dyer's Bay Association. 2019. Testimony on NEP re-designation of Aggregate Resource Act Licence to NEP Escarpment Natural and Escarpment Rural in International bird area (IBA). Agreement reached by limiting future building envelope size. Confirmed species on/near the site included EMR and Black Bear den structure.

EIS. **Cottage Land Use Application**. 2020. Municipality of Northern Bruce Peninsula. Alvar and fen habitat identified near an ANSI; ANSI limits had been refined to remove shoreline development areas. A limited building envelope outlined by the conservation authority was agreed to be sustainable along Pedwell Drive access, while conserving the remaining majority of shoreland fronting a bay and Lake Huron.

L.P.A.T. Leari Holdings. 2020. Chatsworth, Grey County. Testimony on balancing existing private residential and recreational uses, including stocked trout ponds and a campsite, while conserving surrounding natural heritage through stewardship, eco-signage and constraints. Analysis of natural heritage included significant woodland assessment.

Environmental Impact Assessment. **Bruce Anchor Parking.** 2020. Tobermory, County of Bruce. SAAR conducted three-season wildlife surveys on a 27.5 hectare parcel to assess possible impacts on natural heritage *per* the PPS, including respect for traditional Anishinaabek knowledge, including surveys of potential den structure for possible black bear.

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COMPANY PROFILE

Scarlett Janusas Archaeology Inc. (SJAI) is a consulting firm with area representatives in Owen Sound, Kingston, the Greater Toronto Area, Hamilton, London, Peterborough, Niagara-on-the-Lake, and Tobermory, Ontario. We conduct archaeological work **anywhere** in the province of Ontario, on land and underwater. Our experience has taken us to Thunder Bay in the north, Pembroke and Ottawa in the east, Amherstburg in the east; and Niagara on the Lake in the south, and all points in between. Our work has included partnerships and engagement with many Indigenous communities across the province.

Staff and associates include:

- Ms. Scarlett Janusas, President of the company, and an experienced underwater and land based archaeologist, with experience in both prehistoric and historic archaeology, and over 39 years' experience.
- Ms. Susan Bazely, Senior Archaeologist and Education Coordinator, with 33 years' experience;
- Dr. Thomas Arnold, Senior Archaeologist and surveyor, 37 years' experience
- Mr. James Bandow, Senior Archaeologist, 33 years' experience
- Ms. Chelsea Robert; Field Director/Archaeologist; lab supervisor; 10 years' experience;
- Mr. Pete Demarte, Field Director/Archaeologist, 9 years' experience
- Ms. Gina Martin, historian, land conveyancer and genealogist with over 30 years' experience;
- Mr. Patrick Folkes, a recognized marine and land historian with over 40 years research experience;
- Mr. Douglas Sweiger, a material culture specialist in small arms and military history with over 25 years' experience;
- Mr. David Gilchrist, a marine archaeologist and teaching specialist with over 30 years' experience;
- Dr. Kimberly Monk, marine archaeologist and education expert;
- Mr. Jim Garrington, Shark Marine Technologies for geophysical projects
- Associations with cultural heritage firms – ERA and Taylor Hazell Architects.

Our vast experience allows us to offer our clients a multitude of services including both land and underwater archaeology, and prehistoric and historic archaeology. The company has licensed archaeologists under the requirements of the Ontario Heritage Act and is able to conduct Stage 1 (background research), Stage 2 (preliminary field assessment), Stage 3 (definitive field assessment) and Stage 4 (complete site mitigation) for all archaeological projects. In addition, we have the resources to offer our clients follow-up services such as development of interpretative displays, hands-on education, and educational course development.

SCARLETT E. JANUSAS

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EDUCATION

B.A., Anthropology/Archaeology, University of Western Ontario, London, Ontario
M.A., Anthropology/Archaeology, Trent University, Peterborough, Ontario
National Museum of Canada, Ottawa, Ontario
Basic Museum Management Certificate

University of Waterloo, Waterloo, Ontario
Courses towards a Certificate in Environmental Assessment
Submerged Worlds and Marine Archaeology, University of Southampton

AFFILIATIONS

Ontario Marine Heritage Committee
Society for Historical Archaeology
Association of Professional Archaeologists (V.P. 2005-2009) (Pres. 2009-2013) (Past President 2013-2015)
Council for Northeastern Historic Archaeology
Chair of Tobermory Hyperbaric Facility Board (2017-2019)

EXPERIENCE:

2020 Associate, **Archaeological Research Associates**

2020 **Bruce County Archaeological Master Plan Advisory Committee member**
Respond to or pass along email inquiries regarding particular expertise and SJAI's mandate and activities, and provide information about upcoming events. Participate in one-on-one conversations (in-person or teleconference) about heritage topics. Provide input into background research particular to area of expertise and SJAI and; review the draft plans and provide feedback.

2013 to date **SCARLETT JANUSAS ARCHAEOLOGY INC.**
President – Responsible for conducting cultural impact assessment and site mitigation and development of cultural resource management plans for clients in Ontario as part of the Ontario Heritage Act, the Planning Act, Green Energy Act, Environmental Assessment Act, and, the Aggregates Act and as part of environmental impact assessment both on land and underwater. Compliance with the Ministry of Labour Regulations for work conducted underwater. Responsible for day to day management of above mentioned firm. Responsible for varied crew sizes, ranging from 1 to 60 persons depending on project needs. Experience includes writing

proposals and schedules, administration, co-ordination of projects and crew, data collection and analysis, photography, graphics, report writing and preparation, invoicing, payroll, accounting, and compliance mitigation.

2002 -2013 **SCARLETT JANUSAS ARCHAEOLOGICAL AND HERITAGE CONSULTING AND EDUCATION**

President – Responsible for conducting cultural impact assessment and site mitigation and development of cultural resource management plans for clients in Ontario as part of the Ontario Heritage Act, the Planning Act, the Aggregates Act and as part of environmental impact assessment both on land and underwater. Compliance with the Ministry of Labour Regulations for work conducted underwater. Responsible for day to day management of above mentioned firm. Responsible for varied crew sizes, ranging from 1 to 30 persons depending on project needs. Experience includes writing proposals and schedules, administration, co-ordination of projects and crew, data collection and analysis, photography, graphics, report writing and preparation, invoicing, payroll, accounting, and compliance mitigation.

2009, 2010 **THIS LAND ARCHAEOLOGY**

Field Director/Associate – Stage 2, 3 and 4 projects in Greater Toronto area, Richmond Hill, Aurora, Bond Head, Brampton, Brantford, Innisfil, Bradford, Vaughan, Oshawa.

1995 to 2002 **MAYER HERITAGE CONSULTANTS**

Consulting Archaeologist – Responsible for conducting cultural impact assessment and site mitigation and development of cultural resource management plans for clients in Ontario as part of the Ontario Heritage Act, the Planning Act, and as part of environmental impact assessment both on land and underwater. Responsible for varied crew sizes, ranging from 1 to 16 persons, depending on project needs. Responsibilities include writing proposals, schedules, co-ordination of projects and crew, data collection and analysis, photography, graphics, and report writing and preparation.

1993 to 1995 **GOLDER ASSOCIATES LIMITED**

Senior Archaeologist – Responsible for eastern Canada, development of an archaeology section, preparation of proposals, field and laboratory work, preparation of reports, marketing and budgeting. Associate in environmental assessment projects.

1993 to 2002 **ONTARIO MARINE HERITAGE COMMITTEE**

Co-Principal in the Submerged Prehistoric Shoreline Study in Georgian Bay in cooperation with the Ontario Marine Heritage Committee, Parks Canada, Fathom Five National Marine Park and the Geological Survey of Canada. The study focused on the geological history of previously exposed watercourses and the archaeological potential of the former exposed areas for archaeological sites dating to the Paleo and Archaic periods of southwestern Ontario. The technical portion of the project includes the use of side scan sonar, GPS, depth sounders, navy submersibles, remote videos, SCUBA, and computers.

1991 to 2001 **ONTARIO MARINE HERITAGE COMMITTEE**

Chairperson – Responsibilities include scheduling, organization of workshops and meetings, administrative duties, chairing meetings and providing archaeological input into proposed and active projects.

1986 to 1993 **REGIONAL MUNCIPALITY OF WATERLOO**

Regional Archaeologist – Responsibilities included 1) the provision of expert advice on archaeological matters to municipalities, developers, planning, engineering and archaeological

consultants regarding archaeological potential of the Region, and Planning and Development policy pertaining to heritage resource management; 2) undertaking research and special studies to support Regional decisions on archaeologically related matters; 3) acted as an archaeological consultant for the Region; 4) acted as the liaison between the Province of Ontario and the Municipality; 5) developed policy for the effective management of archaeological resources; 6) acted as an information source for private, business and public sectors on matters of archaeology; 7) initiated and conducted special projects a) the creation of a permanent Archaeology Division for the Regional Municipality of Waterloo b) researched, developed and published the **first** Archaeological Master Plan in the Province of Ontario c) invited participant for the Federal Environmental Assessment Review Office Environmental Assessment and Heritage National Workshop, Ottawa; d) staff liaison for the Regional Official Policies Plan Heritage Advisory Committee (1991-1993); e) acquired the loan of the prehistoric and historic Lisso collection and conducted analysis of the collection f) organized and supervised the collection and analysis of urban historic archaeological potential data for urban centres in the Regional Municipality of Waterloo g) member of the Regional Official Polices Plan Management Team h) Regional courses in field archaeology i) volunteer program j) designation of an Aboriginal cemetery for remains located during development and k) field school at the Waterloo County Jail for primary grade students.

1984 to 1997 **SCARLETT JANUSAS AND ASSOCIATES INC.**
President of Archaeological Consulting Firm– Created firm in response to development pressures on archaeological resources. Services provided by the firm included background research studies, archaeological resource assessments, cultural impact studies, interpretative design projects, resource evaluation and interpretation models, extant artifact collection documentation, analysis and interpretation, archaeological excavation and monitoring, cultural resource management, historic research to locate environmental hazards, historic interpretation of properties (genealogy of historic properties). Scarlett Janusas and Associates Inc. was a Canadian heritage and archaeological consulting firm specializing in archaeological resource assessment, cultural impact studies, cultural resource management and interpretative studies for land and underwater heritage resources.

1992 to 1995 **MAYER HERITAGE CONSULTANTS INC.**
Marine Heritage Associate – Responsibilities included management of all marine heritage projects.

1990 **ONTARIO MARINE HERITAGE COMMITTEE**
Co-principal for the archaeological documentation of the HMS NEWASH.

1990 **ONTARIO HERITAGE FOUNDATION**
Principal Conservator – Responsible for the restoration of ceramic class from Inge Va, Perth County, Ontario.

1989 **CANADIAN PARKS SERVICE**
Volunteer – Mapping of the shipwreck the MINCH in Fathom Five National Marine Park.

1988 **SCARLETT JANUSAS AND ASSOCIATES INC.**

Principal Investigator – Responsible for the underwater survey of Ste. Marie II, Christian Island and for research for the marine history of the Christian Islands for the Christian Island Archaeological Master Plan.

1987 **MAYER, PIHL, POULTON AND ASSOCIATES**
Principal Investigator – Responsible for conducting the TransCanada Kirkwell Pipeline Survey.

1987 **SCARLETT JANUSAS AND ASSOCIATES INC.**
Principal Investigator – Responsible for the preliminary investigations of a scuttled ship located in the excavation of the Dome Stadium.

1986 **MAYER, PIHL, POULTON AND ASSOCIATES**

a) Field Assistant – Responsible for the Union Gas pipeline heritage assessment in Ancaster/Hamilton area, housing development.
b) Field Assistant – excavation of the Pengelly site near Mississauga, a Middle Woodland village.
c) Field Assistant – several housing subdivision heritage resource assessments in the cities of Kitchener and Waterloo.

1986 **EMPRESS OF IRELAND HISTORICAL SOCIETY**

Archaeological Consultant – Providing archaeological advice to the Society.

1986 **ONTARIO MARINE HERITAGE COMMITTEE**
Archaeological Assistant – Responsible for the preliminary mapping and excavation of an unidentified mid-19th century ship located in Lake Erie at a depth of 70'.

1986 **SCARLETT JANUSAS AND ASSOCIATES**
Principal – Responsible for investigation of a proposed dock area at Historic Naval and Military Establishments. Underwater archaeological survey.

1985 **TORONTO HISTORICAL BOARD**

Senior Archaeologist – Developed a study report recommending a City Archaeology Policy and implementation guidelines. Two excavations were also conducted at the MacKenzie House and St. James Cathedral. Impact assessment of Toronto Island historic midden.

1984-1987 **MAYER, PIHL, POULTON AND ASSOCIATES**
Consulting Archaeologist – Conducting impact assessments and site mitigation on such projects as Union Gas Pipeline impact assessment in Ancaster/Hamilton area, subdivision in Niagara Region, excavation of the Pengelly site near Mississauga, subdivision assessment in Kitchener, excavation of 19th century mill (Elmdale Mill) in Ajax, and archaeological assessment along Moira River, Belleville.

1984 **CANADIAN PARKS SERVICE**
a) Archaeologist– Responsible for conducting an archaeological resource evaluation of Point Pelee National Park and the development of the Point Pelee National Park Cultural Resource Management Plan. Also conducted two field campaigns to Central Grenedier Island in St. Lawrence Islands National Park. Acted as co-leader in the presentation of a special seminar at Point Pelee National Park to inform staff of progress of the Archaeological Resource

Management Plan and to aid in establishing and interpretation exhibition of the prehistory of man at the Park.
b) Marine Archaeologist (GT-2), Marine Heritage Unit – Red Bay project, Labrador. Responsible for the excavation of a 16th century Spanish Basque whaling ship locating in approximately 40' of water including mapping and recording. Experience with airlifts, dry suits and hot water suits.

1983 **FATHOM FIVE PROVINCIAL PARK**

Docent – Aided visiting divers in orientation to the Park, its rules and regulations, and provided information of shipwrecks of the area.

1983 to 1986 **ONTARIO UNDERWATER COUNCIL**

Vice-President of Marine Conservation – Responsible for providing initiative for the certifying agencies to include an underwater archaeological component in their teaching programs. Developed a slide show on underwater archaeology. Established the Marine Heritage Trust Fun. Hosted and organized numerous underwater archaeological seminars and workshops including Thunder Bay and Toronto.

1983 **MINISTRY OF CITIZENSHIP AND CULTURE**
Archaeologist – Assisted in various underwater archaeological projects across the province including Port Abino and Niagara-on-the-Lake.

1983 **ONTARIO MARINE HERITAGE COMMITTEE**
Consultant – Provided advice on submerged resource survey of waters off the Penetanguishene Naval and Military Establishments.

1983 **SAVE ONTARIO SHIPWRECKS**
Consultant – Provided advice on the recording and survey of an 18th century wharf at Navy Hall.

1983 **ONTARIO HERITAGE FOUNDATION**

Originator, Designer, Producer and Promoter – slide and cassette show on underwater archaeology, lecture material for various diving agencies in Ontario on marine conservation. Grant.

1983 **ONTARIO UNDERWATER COUNCIL**
a) Program Chairperson – 3rd Annual Underwater Archaeological Seminar.
b) Originator and Developer – Ontario Underwater Council Heritage Trust Fund.
c) OUC Representative – Provided input for the National Marine Parks Policy.
1983 to 1991 **MAYER, POULTON AND ASSOCIATES**
Marine Heritage Associate – Provide advice on all marine projects.
1983 **MUSEUM OF INDIAN ARCHAEOLOGY**
Assistant Archaeologist – GO TRAIN (Ministry of Transportation and Communication) survey conducted near Oshawa, Ontario.
Field Director – Crawford Lake site, a Middle Woodland village for the Halton Region Conservation Authority. Supervision of a crew of 8 in the excavation and recording of a longhouse and test trenches.
Field Assistant – archaeological resource assessment of the McGrath Site, Middlesex County.
1982 **MUSEUM OF INDIAN ARCHAEOLOGY**

Assistant Field Director – Willcock site, Byron, Ontario. Responsible for the supervision of the excavation of an undisturbed prehistori (circa 1250 A.D.) site, and the preliminary conservation and cataloguing of artifacts.
Field Director – Crawford Lake site, Halton Region Conservation Authority. Responsible for the excavation of a longhouse and the survey and excavation of a conservation roadway.
Assistant Field Director and Acting Director – Crawford Lake Village site, Halton Region Conservation Authority. Responsible for the excavation of the prehistoric Middleport village, preliminary conservation, cataloguing and flotation.
Assistant Photographer and Designer – Responsibilities included preparation of plates for publication, developing film and PMT production.
Principal Investigator – preliminary underwater archaeological survey of Crawford Lake, Halton Region.
Archaeological Assistant – archaeological resource assessment, City of London.
1981 **MUSEUM OF INDIAN ARCHAEOLOGY**
Assistant Contract Archaeologist – Responsible for conducting archaeological resource assessments on properties scheduled for development.
Contract Archaeologist – responsible for conducting archaeological resource assessment on properties scheduled for development.
Research Associate
1981-1983 SELF-EMPLOYED
Principal Investigator – Preliminary underwater survey of the Kettle Point chert outcrops off Kettle Point, Lambton County (part of Master's thesis).
1981 to 1982 SELF-EMPLOYED
Principal Investigator – Kettle Point Chert project. Kettle Point chert samples were collected and used in a petrological study and spatial and temporal distribution analysis. Methods of investigation included thin section analysis, x-ray fluorescence, neutron activation analysis and isotopic composition analysis. Master's thesis.
1980 **MUSEUM OF INDIAN ARCHAEOLOGY**
Lab analyst – Conducted the preliminary conservation and cataloguing of the 19th century Van Egmond house materials (Seaforth, Ontario).
Assistant Field Director – prehistoric Neutral Lawson village site, London. Responsible for directing excavation, public relations and technical assistance.
Field Director – Archaic site was subject of salvage excavation utilizing waterscreens and heavy machinery.
Field Assistant – excavation of the 19th century Van Egmond House.
Assistant Field Director – multi-component site of Squaw Island in St. Lawrence Islands National park. In association with the Archaeological Survey of Canada, National Museum of Man.
1979 to 1980 **MUSEUM OF INDIAN ARCHAEOLOGY**
Research Assistant – Analysis of the Draper site castellations employing SPSS, using the DEC10 and PDP11 systems. Completed an edit of the Draper rim sherd file.
1979 **MUSEUM OF INDIAN ARCHAEOLOGY**
Research Associate.
Field Director – Upper Thames Conservation Authority. Conducted an intensive field survey of the prehistoric and historic resources in the Glengowan Dam project area and analyzed materials.
Project Director – Upper Thames Conservation Authority. Conducted a preliminary assessment

of the prehistoric and historic cultural resources of the Glengowan Dam Project area.
Field Director – excavation of a Glen Meyer village located in Longwoods Conservation Area and acted as public relations liaison.
Volunteer – Fathom Five Provincial Park, Tobermory, Ontario. Mapping of the 19th century shipwreck, WETMORE.

1978 **MUSEUM OF INDIAN ARCHAEOLOGY**
Research Assistant – Researching reference material for the Museum gallery, including such topics as trade networks, ceremonial goods, settlement patterns, burial practices, and artifact types and interpretation.

1977 **MUSEUM OF INDIAN ARCHAEOLOGY**
Curatorial Assistant – Inventory and preliminary analysis of the complete Wilfred Jury collection.
Archaeological Assistant – Survey of the New Toronto International Airport proposed location, Pickering. Project objectives included locating archaeological resources and preparing a site inventory. Also conducted preliminary conservation and cataloguing of recovered materials.
Research Assistant –analysis of material recovered from the New Toronto International Airport Survey.

The CV has **separate headings** for

- Publications

Project Related Experience

- Regional Resource Management Plans
- Recreational Facilities
- Linear Projects (Highways, Transmission Lines, Waterlines, REA's, etc)
- Marine Based Projects
- Urban Development and Rural Subdivisions and Aggregate Expansions, Other Development
- Cultural Heritage Assessments

APPENDIX C

Aggregate Resources Act, R.S.O. 1990, c. A.8 (Section 12 excerpt)

“**Matters to be considered**

12 (1) In considering whether a licence should be issued or refused, the Minister or the Tribunal, as the case may be, shall have regard to,

(a) the effect of the operation of the pit or quarry on the environment;

(b) the effect of the operation of the pit or quarry on nearby communities;

(c) any comments provided by a municipality in which the site is located;

(d) the suitability of the progressive rehabilitation and final rehabilitation plans for the site;

(e) any possible effects on ground and surface water resources including on drinking water sources;

(f) any possible effects of the operation of the pit or quarry on agricultural resources;

(g) any planning and land use considerations;

(h) the main haulage routes and proposed truck traffic to and from the site;

(i) the quality and quantity of the aggregate on the site;

(j) the applicant’s history of compliance with this Act and the regulations, if a licence or permit has previously been issued to the applicant under this Act or a predecessor of this Act; and

(k) such other matters as are considered appropriate. R.S.O. 1990, c. A.8, s. 12; 1996, c. 30, s. 9 (1, 2); 2002, c. 17, Sched. F, Table; 2017, c. 6, Sched. 1, s. 11 (1); 2017, c. 23, Sched. 5, s. 2; 2021, c. 4, Sched. 6, s. 30 (1)”.