
PLANNING JUSTIFICATION REPORT & AGGREGATE RESOURCES ACT SUMMARY STATEMENT

TOWN OF CALEDON
PLANNING
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December 16, 2022

IN SUPPORT OF

OFFICIAL PLAN AMENDMENT and ZONING BY-LAW AMENDMENT APPLICATIONS & CLASS 'A' LICENCE (PIT and QUARRY BELOW WATER) APPLICATION

PROPOSED CBM CALEDON PIT / QUARRY

CBM Aggregates (CBM)
a Division of St. Marys Cement Inc. (Canada)

Town of Caledon, Region of Peel
December 2022

GSAI File # 541-003

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Planning Justification Report and
Aggregate Resources Act Summary Statement
Proposed CBM Caledon Pit / Quarry

1.0 EXECUTIVE SUMMARY

CBM Aggregates (CBM), a division of St. Marys Cement Inc. (Canada) is applying to the Ministry of Natural Resources and Forestry (MNR) for a Class A Licence (Pit and Quarry Below Water) and to the Town of Caledon for an Official Plan Amendment and Zoning By-law Amendment to permit a mineral aggregate operation. **McNaughton Hermsen Britton Clarkson (MHBC)** and **Glen Schnarr & Associates Inc. (GSAI)** have been retained jointly by CBM to complete a Planning Justification Report and Aggregate Resources Act Summary Statement for the proposed CBM Caledon Pit / Quarry in accordance with provincial, regional and Town of Caledon policy and the Aggregate Resources Act Ontario Regulation 244/97.

The Subject Site is located at the northwest, northeast and southwest intersection of Regional Road 24 (Charleston Sideroad) and Regional Road 136 (Main Street) legally described as Part of Lots 15-18, Concession 4 WSCR and Part of Lot 16, Concession 3 WSCR (former Geographic Township of Caledon). It is proposed that approximately **262 hectares** in this location are to be designated / zoned under the Planning Act and licenced under the Aggregate Resources Act to permit the proposed CBM Caledon Pit / Quarry, and these lands are referred to as the ‘Subject Site’. CBM owns/controls an additional approximately **61 hectares** of land in this vicinity that are not subject to the application. These lands are referred to as “CBM Additional Lands” and include approximately 25 ha located to the north and northeast of the Subject Site, and approximately 36 hectares located south of the Subject site, adjacent to the Hamlet of Cataract. As part of the application, CBM is proposing to create an upland forest and meadow grassland on these southern 36 hectares and is exploring the potential of conveying them permanently to a public authority for long term protection

The proposed Extraction Area includes approximately 80 million tonnes of a high-quality bedrock resource and approximately 5 million tonnes of a high-quality sand and gravel resource. The proposed tonnage limit for the proposed CBM Caledon Pit / Quarry is 2.5 million tonnes per year and on average CBM anticipates shipping approximately 2.0 million tonnes per year once operations are in full production.

The CBM Caledon Pit / Quarry is proposed to be operated in 7 phases, beginning in the “Main Area” (northwest quadrant of Charleston Sdrd./RR 24 and Main Street/RR 136), and progressing to the “North Area” (northeast corner of Charleston Sdrd./RR 24 and Main Street/RR 136), and

then to the ‘South Area’ (southwest quadrant of Charleston Sdrd./RR 24 and Main Street / RR 136). The primary market area for the proposed CBM Caledon Pit / Quarry is the Greater Toronto Area, including the Town of Caledon and the Region of Peel. This Site represents a close to market source of a high-quality mineral aggregate resource.

The proposed CBM Caledon Pit/Quarry is proposed to be progressively rehabilitated and CBM’s after use vision for the Subject Site includes ecological enhancement areas that have been designed to fit into the overall regional context and complement the existing topography and terrestrial and aquatic features in the area. The extraction is below-water and accordingly, rehabilitation to an agricultural after use is not feasible. The overall final rehabilitation plan will consist of three separate lakes in each of the North, Main and South extraction areas surrounded by nearshore, riparian, and upland habitats.

This Planning Justification Report and Aggregate Resources Summary Statement has been prepared to address provincial, regional and Town of Caledon policy through a number of technical reports and the following is a summary:

This Planning Justification Report and Aggregate Resources Summary Statement has been prepared to address provincial, regional and Town of Caledon policy through a number of technical reports and the following is a summary:

- The Subject Site is mapped as HPMARA in the Region of Peel Official Plan and CHPMARA in the Town’s Official Plan, which represents an area of primary significance for sand and gravel and bedrock resources and is protected and prioritized for potential future extraction.
- The Site includes approximately 80 million tonnes of high-quality dolostone bedrock resource and approximately 5 million tonnes of high-quality sand and gravel resource.
- The Site and surrounding lands are located within a rural area within the Town of Caledon. Surrounding land uses include a mix of agricultural, rural residential, existing licenced pits, Hamlet of Cataract, natural heritage areas including the Credit River, a golf course, the Charles Sauriol Conservation Area, and rural roads.
- The Site is located close to the GTA market and will result in minimizing the length and number of vehicle trips required to transport an essential raw material needed for the construction and maintenance of communities, thereby minimizing overall social, economic and environmental impacts.

- For Ontario and Caledon to meet their climate targets, there will be a need to significantly reduce GHG emissions from the transportation sector, which is the leading source of emissions in the province. Close-to-market aggregate production from quarries such as the one proposed in Caledon can cost-effectively reduce emissions from transportation.
- The proposed haul route is an existing and identified haul route in the Town of Caledon Official Plan. The Transportation Impact Study and Haul Route Assessment has demonstrated that with the implementation of the recommendations, the proposed truck traffic from the CBM Pit / Quarry will not have unacceptable impacts on the safe and efficient use of the road network.
- The proposed Site access is located along Charleston Sideroad in between Mississauga Road and Main Street and has been determined to be the most appropriate access location from a haul route, access spacing and impact to existing residents' perspective. A traffic signal warrant is not specifically satisfied in this location however, it is recommended to improve the operation of the intersection by providing suitable gaps for trucks to enter and exit the Site and accelerate safely without posing risk to other vehicles using Charleston Sideroad. It is noted that if the Region desires a signalized Site access, the installation of the signal can be implemented at CBM's expense.
- As part of the application, CBM is prepared to explore opportunity to convey approximately 36 ha along the southern limit of the Site (north of Cataract) permanently to a public authority for long term protection.
- The Subject Site includes an area in the northwest corner of the Main Area that is designated "Environmental Policy Area" in the Town's Official Plan and this area is not included in the proposed extraction area and will be protected from negative impacts. The proposed Official Plan Amendment and implementing Zoning By-Law define the "Environmental Policy Area" designation and "EPA1-487" (Environmental Policy Area 1 -487) zone on Site but outside of the extraction boundary to ensure the protection of the feature and the related VPZ in the northwest portion of the Site. The balance of the Site is proposed to be designated "Extractive Industrial" and zoned "MX-YY" (Extractive Industrial – Special Section) to facilitate the proposed pit/quarry.
- With the implementation of the recommended mitigation measures consisting of berms, the proposed Caledon Pit/Quarry operation will have minimal effect on surrounding agricultural operations. The proposed pit /quarry will utilize existing haul routes minimizing potential traffic related impacts. It is expected that noise, vibration, and dust will be kept at provincial standard. It is also expected that there will be no impacts to surrounding wells, including farm wells. Groundwater monitoring will occur and if a farm

well is affected, there are mitigation measures in place to quickly restore an adequate water supply to farming operation(s).

- Licencing of the proposed Caledon Quarry will be consistent with the agricultural-related policies provided in provincial, regional and local planning documents regarding mineral extraction in prime agricultural areas.
- The proposed application has been subject to a Stage 1/2 Archaeological Assessment and significant archaeological resources have been conserved. There are areas of the Site that require additional archaeological assessment and these areas have been identified on the Site Plans and no site alteration or development is permitted until these sites are cleared of archaeological potential.
- The proposed application has been subject to a Cultural Heritage Report and the majority of the Site does not include significant built heritage resources and significant cultural heritage landscapes. Portions of five listed (not designated) or inventoried heritage properties are located within the Site and may contain heritage potential. Accordingly, these areas require additional cultural heritage assessment and these areas have been identified on the Site Plans and no site alteration or development is permitted until additional assessment is completed and the recommendations of the additional study are implemented. As a result, significant built heritage resources and significant cultural heritage resources are conserved.
- The Visual Impact Assessment has assessed the significant views and how they might be affected by the proposed extractive operation, including the anticipated changes to the natural landscape and the cultural landscape that would result from the operation. The visual assessment identifies required mitigation measures such as berms, entrance designs, vegetation, landscaping and operational matters, and with implementation of the recommendations, the Site has been designed to not result in any unacceptable visual impacts on surrounding land uses. Site visibility will be predominately limited to the establishment of berm and tree screening features that will be successful at eliminating the visibility of the aggregate extraction activity. With the implementation of the proposed rehabilitation plan in the long term, the Site will result in a visual enhancement compared to existing conditions. Specifically, the resulting natural landscape will feature several lakes and a mosaic of woodlands, grasslands and wetlands that will complement and enhance the current agricultural aesthetic.
- An Air Quality Impact Assessment was completed and confirms that the maximum off-Site predicted cumulative concentrations as a result of emissions from the Site are below the assessment criteria. It is noted that with the implementation of the recommendations including the site's Best Management Practices, concentrations of emissions from the Site

are expected to be below the ambient air quality criteria at all surrounding sensitive land uses. As well, the Site has been designed to minimize and mitigate to acceptable levels any potential adverse effects from dust and other air pollutants in accordance with provincial guidelines, standards and procedures.

- A Noise Assessment Report has been completed and confirms that after the implementation of identified noise controls or equivalent measures, the Site will operate in accordance with applicable noise limits as outlined in NPC 300 at all surrounding sensitive land uses. The Site has been designed with mitigation measures to minimize any potential adverse effects from noise to within acceptable levels in accordance with provincial guidelines, standards and procedures.
- A Blast Impact Assessment was completed and it was confirmed that with the implementation of the recommendations contained in the report, the Site will be operated in accordance with the current quarry blasting guidelines published by the MECP (NPC-119) at all surrounding sensitive land uses. It is also confirmed that the Site has been designed to minimize and mitigate to acceptable levels any potential adverse effects from blasting in accordance with provincial guidelines, standards and procedures.
- The Blast Impact Assessment confirms that all blasting and blast monitoring would occur in accordance with the Aggregate Resources Act (Ontario Ministry of Natural Resources and Forestry, 2017) prescribed conditions in order to ensure compliance with the provincial guidelines and through proper blast design and diligence in inspecting the geology before every blast, flyrock will be maintained within the proposed quarry extraction limits.
- The Site does not contain any Core Areas of the Region of Peel Greenlands System, and the proposed extraction area does not include provincially significant wetlands, fish habitat, life science areas of natural and scientific interest (ANSI), earth science ANSI, significant valleylands, significant wildlife habitat, significant woodlands, sand barrens, savannahs, tallgrass prairie or alvars.
- A portion of the Main Area and North Area is part of the Greenbelt “Natural Heritage System”. These areas do not include significant woodlands or habitat of endangered and threatened species habitat and therefore mineral aggregate operations are a permitted use. The rehabilitation plan for these areas has been designed to significantly enhance the Greenbelt Natural Heritage System compared to existing conditions.
- The proposed extraction area includes the removal of 6.3 ha of habitat for endangered species habitat for bats. This habitat is located outside of the Greenbelt Plan Natural Heritage System and development will be completed in accordance with provincial requirements. As a result, the application will result in an overall benefit for bat habitat.

- The proposed extraction area results in the removal of 15.8 ha of habitat for threatened species habitat for bobolink and eastern meadowlark. This habitat is located outside of the Greenbelt Plan Natural Heritage System and development will be completed in accordance with provincial requirements. As a result, the application will result in an overall benefit for bobolink and eastern meadowlark habitat.
- The proposed CBM Caledon Pit / Quarry results in the removal of 18.9 ha of non-significant woodland areas and 67.7 ha of woodland area will be created through off Site ecological enhancement and the rehabilitation plan. Of this, 52.2 ha of woodland areas will be created within the licence area as part of visual screening and rehabilitation plan. 5.0 ha of this will be planted within the first year of the licence being issued. Outside of the licence area, a 15.5 ha woodland will be created within five years of the licence being issued. Taking into consideration the proposed off-Site ecological enhancement plan and the rehabilitation plan, woodland areas will be increased by a 3.6 to 1 ratio (67.7 ha to be created and 18.9 ha to be removed).
- The proposed CBM Caledon Pit / Quarry results in the removal of 0.1 ha of non-significant wetland areas and the proposed rehabilitation plan will create 4.8 ha of wetland area. As a result, wetland areas on Site will be increased by a 48:1 ratio.
- In total the application results in the removal of 22.2 ha of key natural heritage features (i.e. non-significant wetland and habitat of endangered and threatened species) that are permitted to be removed in accordance with applicable policies. Taking into account the proposed rehabilitation plan and the off-Site ecological enhancement plan, the application results in the creation of 100.4 ha of new key natural heritage features (i.e. meadow, wetland, woodland) and 158.3 ha of new key hydrologic features (i.e. lake) that is also considered fish habitat, which is a key natural heritage feature.
- The proposed Caledon Pit / Quarry is within the Credit Valley Source Protection Area but is not located in a wellhead protection area (WHPA) or an intake protection zone (IPZ) and there will be no impacts to municipal water supplies.
- Of the approximately 100 water supply wells evaluated in the Water Report Level 1/2 and Maximum Predicted Water Table Report, a majority of the wells are located at a depth below the proposed quarry floor and they will not be impacted. There are 15 residential wells that have the potential to be affected with respect to water quantity/levels due to their location relative to the predicted zone of influence of the Site, and their relatively shallow well construction in comparison to other wells in the area. In all cases, these wells could be deepened to the depth of other wells in the surrounding area to continue to ensure their ability to supply water should they be affected. In the event of a water well complaint there is an established procedure that the licensee must follow which requires an immediate

investigation and supply of temporary water if required. If any well was impacted by the proposed pit / quarry operation it is the licensee's responsibility to restore the water supply, at their expense. As part of the operation there will be an extensive on-Site and off-Site groundwater monitoring program and annual reports that will be submitted to the government agencies and publicly available. As a result of the proposed design of the quarry, the comprehensive groundwater monitoring and reporting requirements and the water well complaint procedure, it is concluded that water supply wells in the surrounding area will be protected.

- The proposed extraction area does not contain any identified water resources on the Region of Peel Schedule A-1 (Water Resources, Systems and Features). The proposed licence area includes an identified feature in the northwest corner of the Main Area and this feature is located outside of the extraction area and will be protected.
- A small portion of Main Area, a very small portion of the North Area and the majority of the South Area is mapped as a Highly Vulnerable Aquifer on the Region of Peel Schedule A-2 (Highly Vulnerable Aquifers). This is very common for mineral aggregate resource areas, and based on the design of the operation, and the implementation of the recommendations contained the Water Report Level 1/2 and the Maximum Predicted Water Table Report, the proposed Caledon Pit / Quarry does not result in additional risk to the aquifer.
- Almost all of the Rural Area in the Region of Peel including the Main Area, North Area and South Area are mapped as a Significant Groundwater Recharge Area on the Region of Peel Schedule A-3 (Significant Groundwater Recharge Area). This is very common for mineral aggregate resource areas, and based on the design of the operation, and the implementation of the recommendations contained in the Water Report Level 1/2 and the Maximum Precited Water Table Report, the groundwater recharge function of the area will be maintained.
- There are no key hydrologic features located within the proposed extraction area. There is a 0.1 ha key hydrologic feature (i.e., wetland) that will be impacted for the construction of the proposed berm and this feature is permitted to be removed in accordance with applicable policies. There are also key hydrologic features (i.e., wetland and tributary) in the northwest corner of the Main Area and these features will be protected. Taking into consideration the rehabilitation plan, there are 4.8 ha of wetland to be created and 158.3 ha lake to be created resulting in 163 ha of new key hydrologic features.
- The application includes a detailed monitoring and reporting requirements to ensure ongoing verification that adjacent sensitive groundwater features and sensitive surface water features will be protected, improved or restored.

- With the implementation of the recommendations in this report, sensitive surface water features and sensitive groundwater features will be protected, improved and restored during operations.
- Taking into account rehabilitation, there will be a long term enhancement to the water resources system and features.
- The proposed application has been subject to a Socio-Economic Assessment which has assessed social impacts based on predictable, measurable, significant, objective effects on people caused by factors such as noise, dust, traffic levels and vibration in accordance with the Town of Caledon Official Plan. With the implementation of the recommendations from the various technical reports noise, dust, traffic and vibration levels will be mitigated to minimize impacts and ensure there will not be any unacceptable impacts on the community.
- The proposed CBM Caledon Pit / Quarry will directly result in significant economic benefits at the regional and local level taking into account the proposed jobs that will be generated, the increase in property taxes for the Town of Caledon and Region of Peel and School Boards, and the increase in revenue the Town and Region will receive from the annual aggregate licencing fees. Indirectly, the Region and Town's economy will also benefit due to the proximity of the Site to the consumer which results in reduced cost for transporting an essential raw material that is needed for the construction and maintenance of communities.
- Approximately 6.3% of the Site is subject to the Town's approved Rehabilitation Master Plan (RMP). The portion of the Site that is subject to the RMP is located in the northwest portion of the Site, adjacent to Mississauga Road, and the RMP envisions this area as natural heritage and adjacent agriculture. The Final Rehabilitated Landform and Ecological Enhancement Areas Plan for the proposal plans for natural heritage and agriculture in this location and is consistent with the Town's approved RMP.
- Approximately 93.7% of the Site is not subject to the Town's approved Rehabilitation Master Plan (RMP). The proposed rehabilitation plan envisions natural heritage ecological enhancements, including lakes, wetlands, woodlands, grasslands and meadows, and therefore the Plan is generally consistent with the vision for surrounding lands presented in the RMP.

Overall, the proposed CBM Caledon Pit / Quarry represents good planning, wise resource management and has been sited and designed to address the requirements of the Aggregate Resources Act Provincial Standards, be consistent with the Provincial Policy Statement, and conform to the Growth Plan for the Greater Golden Horseshoe, Greenbelt Plan, Region of Peel Official Plan and Town of Caledon Official Plan.

2.0 OVERVIEW OF THE PROPOSED CBM CALEDON PIT / QUARRY

CBM is applying to the Ministry of Natural Resources and Forestry (MNRF) for a Class A Licence (Pit and Quarry Below Water) and to the Town of Caledon for an Official Plan Amendment and Zoning By-law Amendment to permit a mineral aggregate operation. McNaughton Hermsen Britton Clarkson (MHBC) and Glen Schnarr & Associates Inc. (GSAI) have been retained jointly by CBM to complete a Planning Justification Report and Aggregate Resources Act Summary Statement for the proposed CBM Caledon Pit / Quarry in accordance with the Town of Caledon Official Plan and Zoning By-Law, and the Aggregate Resources Act Ontario Regulation 244/97.

CBM owns / controls approximately 323 hectares of land located at the northwest, northeast and southwest intersection of Regional Road 24 (Charleston Sideroad) and Regional Road 136 (Main Street). Of these lands, approximately 262 hectares are proposed to be designated / zoned under the Planning Act and licenced under the Aggregate Resources Act to permit the proposed CBM Caledon Pit / Quarry, and these lands are referred to as the ‘Subject Site’ (**Figure 1: Location Plan of Subject Site**). These lands are mapped as a High Potential Mineral Aggregate Resource Area (HPMARA) in the Region of Peel Official Plan and as a Caledon High Potential Mineral Aggregate Resource Area (CHPMARA) in the Town of Caledon Official Plan and are protected for their aggregate potential.

The remaining approximately 61 hectares of land owned / controlled by CBM are not subject to the application. These lands are referred to as “CBM Additional Lands” and include approximately 25 ha located to the north and northeast of the Subject Site, and approximately 36 hectares located south of the Subject site, adjacent to the Hamlet of Cataract (**Figure 2: CBM Additional Lands**). As part of the application, CBM is proposing to create an upland forest and meadow grassland on these southern 36 hectares and is exploring the potential of conveying them permanently to a public authority for long term protection.

The lands proposed to be licenced under the Aggregate Resources Act are referred to as the “Subject Site” and are legally described as Part of Lots 15-18, Concession 4 WSCR and Part of Lot 16, Concession 3 WSCR (former Geographic Township of Caledon). The Subject Site is approximately 262 hectares and extraction is proposed on approximately 204 hectares. These lands are referred to as the “Extraction Area” (**Figure 3: Proposed Extraction Area**). The remaining approximate 58 hectares within the Subject Site and outside of the Extraction Area are referred to as the “Setback / Buffer Lands”. The Setback / Buffer Lands are used to provide setbacks to surrounding land uses and natural heritage features and the majority of these lands include a 5 metre visual / acoustic berm and visual plantings.

The proposed Extraction Area includes approximately 80 million tonnes of a high-quality bedrock resource and approximately 5 million tonnes of a high-quality sand and gravel resource. Testing has confirmed that the mineral aggregate resource found on-Site is suitable for the production of a wide range of construction products, including the use for high performance concrete. The bedrock resource provides some of the strongest and most durable aggregate material in Southern Ontario. The primary market area for the proposed CBM Caledon Pit / Quarry is the Greater Toronto Area, including the Town of Caledon and the Region of Peel. This Site represents a close to market source of a high-quality mineral aggregate resource.

The proposed tonnage limit for the proposed CBM Caledon Pit / Quarry is 2.5 million tonnes per year and on average CBM anticipates shipping approximately 2.0 million tonnes per year. The proposed CBM Caledon Pit / Quarry is proposed to be operated in 7 phases. Phases 1, 2A, 3, 4, 5 are located to the northwest of the intersection of Regional Road 24 and 136. This area is referred to as the “Main Area”. Phase 2B is located to the northeast of the intersection of Regional Road 24 and 136. This area is referred to as the “North Area”. Phase 6 and 7 are located to the southwest of the intersection of Regional Road 24 and 136. This area is referred to as the “South Area” (*Figure 4: Operations / Phasing Plan*).

Operations would commence in the Main Area and Phase 1 would include the permanent processing area (crushing, screening and wash plant), aggregate recycling area and the entrance / exit for the quarry. Until such time as sufficient space is opened up to establish the permanent processing area, a temporary mobile crushing and processing plant is proposed to be used in Phase 1. The entrance / exit for the CBM Caledon Pit / Quarry is proposed to be located onto Regional Road 24, approximately 760 m west of Regional Road 136, measured from centreline to centreline. The entrance / exit is proposed to be controlled by a new traffic light and the installation of auxiliary turn lanes and tapers Regional Road 24 at CBM’s expense. The primary haul route for the proposed CBM Caledon Pit / Quarry is trucks will travel eastward on Regional Road 24 and then southward on Highway 10. The proposed haul route is an existing aggregate haul route and is designated as an aggregate haul route in the Town of Caledon Official Plan.

Access to the North Area for aggregate extraction is anticipated approximately 10 years after the start of the operations in the Main Area. There will be no processing in the North Area and aggregate extracted from the North Area is proposed to be transported to the Main Area through a proposed tunnel underneath Regional Road 136, that would accommodate either a conveyor system or a truck crossing. Access to the South Area is anticipated approximately 30 years after the start of the operations in the Main Area. In the South Area, CBM is proposing to permit a portable processing plant and the aggregate extracted and /or processed from the South Area is proposed to be transported to the Main Area through a proposed tunnel underneath Regional Road 24 that would accommodate either a conveyor system or a truck crossing. Aside from the establishment of a 1 hectare stormwater settling pond on the easternmost portion of the North Area

in the initial year of operation, the North and South areas will be maintained in their current state and agricultural uses until they are required for preparation for aggregate extraction.

The CBM Caledon Pit / Quarry is proposed to operate (extraction, processing and drilling) 7:00 am to 7:00 pm Monday to Saturday, excluding statutory holidays, and shipping is proposed from 6:00 am to 7:00 pm Monday to Saturday consistent with other mineral aggregate operations in Caledon. CBM is also proposing to permit limited shipping in the evening (7:00 pm to 6:00 am) to support public authority contracts that require the delivery of aggregates during these hours to complete public infrastructure projects. These activities will be limited to only highway trucks and shipping loaders and no other operations will be permitted during evening hours. Site preparation and rehabilitation is proposed to be permitted 7:00 am to 7:00 pm Monday to Friday.

The proposed CBM Caledon Pit / Quarry involves stripping topsoil and overburden from the Subject Site to create a perimeter of berms and any excess soil will be temporarily stored in the northern portion of the Main Area or used for progressive rehabilitation of the site. The proposed Extraction Area includes extracting sand, gravel and bedrock resources below the water table and the Site will be dewatered to allow operations in a dry state. The Site will be extracted in sequence of the proposed phases (Phase 1 to 7) and, following extraction of Phase 7, the permanent processing plant in Phase 1 will be removed and this will be the final area to be extracted and rehabilitated. The phasing of the proposed mineral aggregate operation has been designed to reach final extraction limits and depths within each phase so progressive rehabilitation of the side slopes can be completed.

The overall goal of the final rehabilitation plan is to create a landform that represents an ecological and visual enhancement and provides future opportunities for conservation, recreational, tourism and water management. Overall, the progressive and final rehabilitation plan for the Subject Site includes the creation of 158.3 hectares of lakes, 7.9 hectares of gradual grades and islands, 4.8 hectares of wetlands, 52.2 hectares of woodlands, 15.8 ha of grasslands, 7.6 ha of meadow, and 15.8 hectares to remain in existing conditions. The proposed rehabilitation has been designed to use all of the on-Site topsoil and overburden and does not require the importation of additional soils (*see Figure 9: Final Rehabilitated Landform and Ecological Enhancement Areas*).

The proposed CBM Caledon Pit / Quarry is located where the resource exists and where Provincial, Regional and local policy anticipates extraction to occur. This Planning Justification Report and ARA Summary Statement has assessed the feasibility of the proposed CBM Caledon Pit / Quarry and based on the technical analysis and implementation of the recommendations found in each technical report, this assessment concludes the following:

- The proposed CBM Caledon Pit / Quarry represents good planning, wise resource management and has been sited and designed to address the requirements of the Aggregate Resources Act Provincial Standards;
- The proposal is consistent with the Provincial Policy Statement;
- The proposal conforms to the Growth Plan for the Greater Golden Horseshoe and the Greenbelt Plan;
- The proposal conforms to the Region of Peel Official Plan; and
- The proposal conforms to the Town of Caledon Official Plan (2018).

3.0 APPROACH AND BASIS OF REPORT

This report has been prepared to support Town of Caledon Official Plan and Zoning By-Law Amendment Applications under the Planning Act and a Class A License to permit Below Water Extraction on the Site pursuant to the ARA. It is acknowledged that the Planning Act approvals must be in place before a Licence may be obtained under the ARA from the Ministry of Natural Resource and Forestry (MNRF).

The approach which will be followed in the assessment of the planning rationale for the proposed CBM Caledon Pit / Quarry involves a review and description of the Subject Site and surrounding lands, and a review of the policies of the various levels of government to confirm that this development proposal is consistent with, and conforms to, the intent of the various applicable policy documents. The policy / planning documents to be reviewed in connection with this Planning Justification Report include the following:

- The Growth Plan for the Greater Golden Horseshoe (2020);
- The Greenbelt Plan (2017);
- The Niagara Escarpment Plan (2017);
- The Provincial Policy Statement (2020);
- The Region of Peel Official Plan (2022);
- The Town of Caledon Official Plan (2018); and
- The Town of Caledon Zoning By-Law No. 2006-50

The Aggregate Resources Act Summary Statement is contained as *Appendix A* to this Report.

4.0 REQUIRED LAND USE APPLICATIONS

4.1 Proposed Official Plan and Zoning By-Law Amendment Applications

The Region of Peel Official Plan includes mapping, objectives and policies indicating where new aggregate operations are encouraged to locate, and policy directives to evaluate applications to ensure social and environmental impacts are minimized. An amendment to the Region of Peel Official Plan is not required to permit a new aggregate operation in Peel.

The Town of Caledon Official Plan and Zoning By-Law require amendments to permit a new mineral aggregate operation. The Town's Official Plan includes similar mapping and policies to identify where new operations are encouraged to locate, and policies to evaluate a proposal, but the Caledon Official Plan does not pre-designate land for new mineral aggregate operations.

The Subject Site is located within the Region of Peel's High Potential Mineral Aggregate Resource Area (HPMARA) and within the Town of Caledon's High Potential Mineral Aggregate Resource Area (CHPMARA). The Region of Peel Official Plan's HPMARA schedule (**Figure 5: Excerpt Region of Peel Schedule D-2 (HPMARA Lands)**) generally identifies lands that include primary and secondary sand and gravel resource areas and bedrock resources located in the Region that are not constrained by significant natural heritage features, Plans of Subdivision, and approved settlement areas. It is confirmed in the ROP that an amendment to the Plan is not required to advance a proposal for a new mineral aggregate resource operation in Peel; however, a local official plan amendment will be required to identify local refinements to the areas to be protected or extracted, and a permissive designation and/or policy will be required for the establishment of a new operation.

The Regional HPMARA has been further refined at the local level to reflect the Town of Caledon's local environmental, cultural, social, and other planning considerations to create the Caledon HPMARA (CHPMARA) (**Figure 6: Excerpt Town of Caledon Schedule L (CHPMARA Prioritization Plan)**). The CHPMARA schedule similarly identifies high potential mineral aggregate resource deposits for protection for possible future extraction. CHPMARA consist of areas of earth materials including sand, gravel, shale, dolostone, and sandstone as identified generally and categorized in the Aggregate Resources Inventory of the Region of Peel.

The subject Site is currently designated "General Agricultural Area", "Rural Lands", and "Environmental Policy Area". New (below water) aggregate operations, such as the proposed CBM Caledon Pit / Quarry, require a Town of Caledon Official Plan Amendment to redesignate the lands to "Extractive Industrial B Area". The proposed OPA for the CBM Caledon Pit/Quarry also includes an area in the northwest corner of the Site to be designated "Environmental Policy Area", consistent with a tributary feature in that vicinity.

As well, an amendment to the Town of Caledon Zoning By-Law to rezone the subject lands to “MX-YY” (Extractive Industrial-Special) and “EPA1-487” (Environmental Policy Area 1 – 487) to implement the Official Plan Amendment to permit an aggregate quarry, and to permit licencing (but not extraction) within the northwest corner of the Site will be required. Because site-specific relief to the parent “MX” zone is proposed to recognize the overall proposed GFA on site, to add specificity to the proposed uses on Site, and to clearly define that the contiguous parcels of land/lots within each of the Main Area, North Area and South Area are to be considered a ‘lot’ for the purposes of this proposal, an “MX-Special” zone is being sought.

The Draft Official Plan Amendment and draft implementing Zoning By-Law are attached to this report as *Appendix B and C*, respectively.

4.2 Proposed ARA ‘Class A’ Licence Application

Under the Aggregate Resources Act (ARA), a ‘Class A’ Licence (Pit / Quarry Below Water) is required from the Ministry of Natural Resources and Forestry (MNR) for a pit/quarry proposing to remove more than 20,000 tonnes of aggregate annually. The proposed CBM Caledon Pit / Quarry proposes to extract, process and transport up to a maximum 2.5 million tonnes of aggregate annually from the Site and, accordingly, a ‘Class A’ Licence is required.

The ARA regulation requires that Site Plans and technical reports which accompany a licence application be prepared and submitted according to the standards. The ‘Technical Reports and Information Standards’ (August 2020) has two parts which must accompany all applications, including (1) a Summary Statement and (2) Technical Reports. The ‘Site Plan Standards’ (August 2020) outlines the drawing requirements which must be included on the Site Plan drawing set for any licence application, including existing features, operations, cross sections, and rehabilitation.

The ARA Summary Statement is attached as *Appendix A* to this Report, and the requisite Technical Reports and Site Plans are enclosed with this complete submission.

5.0 LIST OF TECHNICAL REPORTS

The proposed CBM Caledon Pit / Quarry has been designed based on the recommendations included in a number of technical reports. The areas of discipline include agricultural, water resources, ecology, traffic, visual impact, archaeology, cultural heritage, noise, blasting and vibration, air quality and social economics. The controls and mitigation measures specified by the reports form the basis of the operational design of the quarry and the planning analysis, and specific technical recommendations are included on the proposed Aggregate Resources Act Site Plans (MHBC, December 2022).

In addition to this Planning Justification Report and ARA Summary Statement, as well as the ARA Site Plans, the following is a list of reports that were defined through pre-consultation with the Region of Peel, Town of Caledon and Credit Valley Conservation, and have been prepared for the CBM Caledon Pit / Quarry proposal to evaluate and assess the establishment of a new aggregate pit / quarry on the Site:

1. Phase 1 Environment Site Assessment (For 12 Separate Sites) (Golder Associates Ltd., Various Dates over 2021-2022);
2. Stage 1/2 Archaeological Assessment for the Proposed CBM Caledon Quarry (Golder Associates Ltd., November 14, 2022);
3. Agricultural Impact Assessment (Colville Consulting Inc., December 2022);
4. Water Report Level 1/2 (Golder Associates Ltd., December 2022);
5. Maximum Predicted Water Table Report (Golder Associates Ltd., December 2022);
6. Natural Environment Report for the Proposed CBM Caledon Pit / Quarry (Golder Associates Ltd., December 2022);
7. Transportation Impact Study and Haul Route Assessment (T.Y. Lin International Canada Inc., December 2022);
8. Visual Impact Assessment (Golder Associates, December 2022);
9. Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment for the Proposed CBM Caledon Pit / Quarry (Golder Associates Ltd., December 2022);
10. Noise Assessment Report (Golder Associates Ltd., December 2022)
11. Blast Impact Assessment for the Proposed CBM Caledon Pit / Quarry (Golder Associates Ltd., December 2022);
12. Air Quality Impact Assessment for the Proposed CBM Caledon Pit / Quarry (Golder Associates Ltd., December 2022); and
13. Socio-Economic Assessment for the Proposed CBM Caledon Pit / Quarry (Golder Associates Ltd., December, 2022).

Prior to preparation of many of these reports, Terms of Reference were prepared in consultation with the Region of Peel, Town of Caledon, CVC and the CBM Team. The Terms of Reference documents have been included in **Appendix D** to this Report and are also contained within each relevant Technical Report.

6.0 PROCESS AND ENGAGEMENT

Public engagement and consultation are important and critical components of the planning process. The engagement strategy to guide consultation through this process has been ongoing since 2019 and is designed to create open and transparent ways for the public to communicate feedback, suggestions and questions, and for CBM and their team to respond appropriately and efficiently with additional detail, where helpful.

On February 10, 2021, CBM and their team attended the Town of Caledon's Pre-Consultation Meeting (DART) with staff from Region of Peel, Town of Caledon and CVC. The purpose of this meeting was to discuss the proposed CBM Caledon Pit / Quarry and to receive a list of submission requirements to complete the Official Plan and Zoning By-Law Amendment Applications.

Town of Caledon Staff issued a Pre-Consultation Application (DART) Checklist on April 28, 2022 outlining preliminary comments and the materials required to satisfy a complete application to permit the proposed CBM Caledon Pit / Quarry. Numerous subsequent discussions have occurred between the CBM Team and Town staff to confirm submission requirements and the DART Checklist has been updated and is included with this submission, as a result. This application is submitted with all requisite accompanying materials to be deemed complete Official Plan and Zoning By-Law Amendment applications.

During 2020 and 2021, a number of Public Information Sessions were convened, and at the time CBM was following the advice and direction provided by the provincial and regional Medical Officers of Health and undertook all public engagement in a virtual format. Attached as *Appendix E* is a Public Engagement Summary prepared by Golder Associates Ltd. summarizing the Indigenous consultation that has occurred to date, virtual PIC's that have occurred to date with the community, the Project Website which offers the public the opportunity to check on the project details and status, including a series of frequently asked questions (FAQs), and details the Project Email contact for any questions members of the community may wish to ask outside of the PIC / Public Meeting formats.

CBM is committed to engaging with the community and members of the public, as well as staff from agencies, the Town and members of Council throughout the planning and ARA processes. The following steps are proposed at a minimum to ensure continued dialogue and openness in order to ensure the public is kept informed and their feedback is provided to CBM:

- Once the development applications are formally submitted, one or more informal public meetings / PICs / Open Houses may be convened to continue to inform the public, to provide information / updates, and to provide opportunity for feedback/ Q&A
- The CBMCaledonQuarry web site will be continually updated to reflect the application status, notice(s) of upcoming meetings, updates to FAQ's, and will include copies of Technical Reports once finalized; and
- the Statutory Public Meeting will occur with Caledon Planning Committee/Council (date TBD).

A plan to engage the public early and as frequently as required will lead to a clearer understanding by members of the public of the process and details of the applications and will assist CBM in understanding any comments or concerns as the applications advance through the process. The proposed strategy for consulting with the public with respect to the application will meet or exceed

the requirements of the Planning Act and the Aggregate Resources Act for public engagement and statutory meetings.

7.0 DESCRIPTION OF SUBJECT SITE AND SURROUNDING LANDS

The lands proposed to be licenced under the Aggregate Resources Act are referred to as the “Subject Site” and are legally described as Part of Lots 15-18, Concession 4 WSCR and Part of Lot 16, Concession 3 WSCR (former Geographic Township of Caledon). The Subject Site is irregularly shaped and is comprised of three main blocks of land (bisected by Charleston Sideroad and Main Street). The Subject Site consists of approximately 262 hectares and extraction is proposed on approximately 204 hectares (*Figure 3*).

The Subject Site is characterized by open agricultural fields and pasture. There are also non-significant woodlands in the north, northwest and south portions of the Site. There are also several structures associated with residential properties within the Site, including houses, barns and other outbuildings. There is also one unnamed tributary in the northwest corner of the Site.

The Site is located north of the Hamlet of Cataract and contains a large quantity of bedrock resource as well as sand and gravel resources. The limestone resource formation is approximately 8 to 27 metres thick, and the depth of the proposed quarry would reflect the thickness of this formation throughout the site.

7.1 Aggregate Resources Present on Site

The proposed Extraction Area includes approximately 80 million tonnes of a high-quality bedrock resource and approximately 5 million tonnes of a high-quality sand and gravel resource. Testing has confirmed that the mineral aggregate resource found on-Site is a provincially significant resource (Gasport Amabel) and is suitable for the production of a wide range of construction products, including the use for high performance concrete, road building, and construction aggregate. The bedrock resource provides some of the strongest and most durable aggregate material in Southern Ontario. A drilling program by Golder indicates that the thickness of the targeted limestone lithology (Gasport Amabel) ranges from 8 m to 27 m.

The proposed CBM Caledon Pit / Quarry is proposed on lands identified as high potential mineral aggregate resource areas in both the Region of Peel and Town of Caledon Official Plans (see *Figures 5 and 6*).

The primary market area for the proposed CBM Caledon Pit / Quarry is the Greater Toronto Area, including the Town of Caledon and the Region of Peel. This Site represents a close to market source of a high-quality mineral aggregate resource. Aggregates are a non-renewable natural

resource found at fixed locations, and Caledon has a plentiful supply of aggregates, including in the vicinity of, and within, the Subject Site. Aggregates are important to our everyday lives and the economy and, accordingly, aggregates are to be protected for future use and should be made available close to the market within which they are to be used. The presence of high-quality bedrock known as Gasport Amabel on Site presents an opportunity to manage and produce the aggregate resource close to existing, established haul routes along Charleston Sdrd. and Highway 10, and close to the GTA market.

7.2 KNHF / KHF's On Site and Surrounding Lands

The Natural Environment Report provides a summary of all natural heritage features and functions on Site and on surrounding lands, within a 'study area' defined in the Natural Environment Report as being approximately 120 m beyond the proposed licence limit. Key Natural Heritage Features (KNHFs) identified on Site, and within the proposed extraction limit include **SAR habitat** for little brown myotis, eastern small-footed myotis, bobolink and eastern meadowlark. It should be noted that mineral aggregate resource extraction is prohibited within habitat of threatened or endangered species within the Greenbelt NHS, however, KNHFs located outside of the NHS are subject to policies of PPS, which permits development within habitat of endangered and threatened species in accordance with provincial or federal requirements. The above noted SAR is located in the Greenbelt Protected Countryside, but not within the NHS overlay.

On Site, but outside of the proposed extraction limit, the Natural Environment Report also confirms that KNHFs and KHFs identified include **fish habitat** associated with **Tributary #1** and **unevaluated wetlands** (Unit #1, #3, #4 and #5). Mineral aggregate extraction is permitted within and adjacent to fish habitat in accordance with provincial and federal requirements; however, a 30 m extraction setback will be implemented to Tributary #1 so no negative impact to fish habitat or to the tributary is expected.

Wetland Unit #1 is located on Site and outside the proposed extraction area, but was found to not meet the size criterion, and no significant ecological functions were identified. It is proposed that Unit #1 will be removed to construct a berm; however, 4.8 ha of wetland area will be created during rehabilitation. Wetland Units #3 and 4 were the only units that met the size criterion to be considered for assessment. It was confirmed that they have a hydrological connection and are eligible for complexing with the adjacent unevaluated non-significant Coulterville Wetland Complex. Accordingly, the Natural Environment Report has recommended these wetland units be complexed with the Coulterville Wetland Complex, and a 30 m extraction setback and a 10 m VPZ will be implemented from these wetland units (Unit #3 and 4) as well as from Unit #5.

As well, the Natural Environment Report concludes that off-Site, but within the Report's 'study area', KNHFs and KHFs include **fish habitat** associated with the **Credit River, wetlands** within the Greenbelt NHS associated with the Coulterville Wetland Complex, **significant woodlands** within the Greenbelt NHS, **significant valleylands** associated with the Credit River Valley, and **significant wildlife habitat** (SWH) associated with the eastern wood-peewee, wood thrush, and grasshopper sparrow have been identified. Based on the recommendations of the Natural Environment Report these adjacent features will not be negatively impacted by the proposed CBM Pit / Quarry.

7.3 Agricultural Resources on Site and Surrounding Lands

The proposed CBM Caledon Pit / Quarry is predominantly located in a prime agricultural area and pursuant to Provincial policy, an agricultural impact assessment was completed. The PPS defines prime agricultural areas as areas where prime agricultural lands predominate. Prime agricultural lands include specialty crop areas and Canada Land Inventory (CLI) Classes 1, 2 and 3 soils, in this order of priority for protection. As confirmed in the Agricultural Impact Assessment (Colville, 2022), the Region of Peel Official Plan (2022) maps the portion of the Subject Site west of Main Street as 'Prime Agricultural Area' on Schedule D-1 (Rural System) in the Region's Official Plan (*Figure 7: Excerpt Schedule D-1 Region of Peel (Rural System)*). The portion of the Subject Site east of Main Street is designated "Rural Lands" (*Figure 7*). The Agricultural Impact Assessment confirms that approximately 45% of the Subject Site contains prime agricultural lands (consisting of CLI Class 2) and the balance, consisting of approximately 55% of the Subject Site, consists of non-prime agricultural lands (i.e. CLI Classes 4 and 5).

The Agricultural Impact Assessment completed for the CBM Caledon Pit / Quarry concludes the following:

- The majority of the Subject Site contains non-prime agricultural lands (consisting of CLI Class 4 and 5 soils);
- Alternate locations within the HPMARA lands in which the Subject Site is situated were considered as part of an alternate site study and it was determined that the proposed Site is a reasonable choice of location and utilizes lower priority agricultural lands;
- With the implementation of the recommended mitigation measures, the proposed CBM Caledon Pit / Quarry operation will have minimal effect on the surrounding agricultural operations.
- The proposed quarry will utilize existing haul routes, thereby minimizing the potential for traffic related impacts to surrounding agricultural operations.
- It is expected that noise, vibration, and dust will be kept to at or below provincial standards, accordingly no additional net impacts to agriculture are anticipated.
- Groundwater monitoring will occur and if farm well(s) are affected, there are mitigation measures in place to quickly restore an adequate water supply to farming operation(s).

Within the Subject Site, the application proposes removal of 119.18 ha (45.41% of Subject Site) of CLI Class 2 lands for extraction. Planning policy permits aggregate extraction within prime agricultural areas, on prime agricultural lands, and does not require rehabilitation back to agricultural when certain tests have been met, including when there is a substantial quantity of mineral aggregate resources below the water table proposed for extraction. The Agricultural Impact Assessment addresses these requirements and concludes that rehabilitation of the Site back to agricultural is not required.

With the implementation of the recommended mitigation measures discussed in the Agricultural Impact Assessment, the majority of the potential direct impacts can be minimized and many of the indirect impacts can be avoided or minimized to the extent feasible. The largest impact is the removal of 119.18 ha of prime agricultural land within the Subject Site for which there is no opportunity to avoid. This area will eventually be removed from the agricultural land base as development of the extraction site commences. It has been recommended that those lands not required for immediate extraction and Site preparation be kept in agricultural production for as long as possible.

Overall, it has been confirmed that licencing of the proposed CBM Caledon Pit / Quarry will be consistent with the agricultural-related policies provided in provincial, regional and local planning documents regarding mineral extraction in prime agricultural areas.

7.4 Archaeological and Cultural Heritage Resources on Site and Surrounding Lands

Planning policy requires that significant cultural resources, including archaeological resources, built heritage resources and cultural heritage landscapes be conserved. A ‘Stage 1 and 2 Archaeological Assessment’ and a ‘Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment’ were both completed for the proposed CBM Caledon Pit / Quarry.

The Stage 1 and 2 Archaeological Assessment identified 10 Euro-Canadian sites and 4 Pre-contact Indigenous sites for which a Stage 3 Assessment has been recommended. Each of these sites have met the requirements under the MTCS’s Standards and Guidelines for Consultant Archaeologists requiring a Stage 3 Assessment. For each of these archaeological sites within the Subject Site, it is recommended that these sites are avoided and protected by establishing a 70 m “Archaeological Protection Area” around the extent of each site, until the requisite Stage 3 Assessment is completed (and possibly Stage 4 Mitigation, if necessary). These “Archaeological Protection Areas” have been identified on the ARA Site Plans for the proposed CBM Caledon Pit / Quarry and site alteration is prohibited within these limits until such time as the Stage 3 (and possibly Stage 4) Archaeological Assessments are completed and clear these sites. The Stage 3 Assessments are currently underway and will be submitted to the Ministry upon completion.

The Cultural Heritage Report established a study area larger than the Subject Site, generally encompassing all property parcels within or crossed by the preliminary limit of extraction areas as well as adjacent properties. Research and field investigations conducted for the Cultural Heritage Report identified 14 known Built Heritage Resources (BHRs), one known CHL (Cultural Heritage Landscape consisting of the Credit Valley Railway), and one potential CHL (Cultural Heritage Landscape – Cataract) within the study area. These are listed in the report along with confirmation that no direct or indirect impacts to these resources are anticipated and no adverse impacts are anticipated to the property’s potential CHVI (Cultural Heritage Value or Interest) and heritage attributes, as a result of the proposed extraction.

The report concludes that that portions of five properties that are listed or inventoried (not designated) heritage properties are located within the Subject Site. The report notes that the potential heritage attributes on each property have been identified on the Aggregate Resources Act Site Plans with a 50 m construction buffer and no site alteration or development is permitted until a Heritage Impact Assessment is completed. The HIA will include a full evaluation of the property using the criteria prescribed in O. Reg. 9/06, provide a Statement of CHVI with list of heritage attributes, identify all direct and indirect impacts, and recommend site-specific mitigation measures to ensure the CHVI and heritage attributes of the property are conserved in accordance with provincial requirements.

Based on the recommendations of this report, surrounding cultural heritage landscapes will not be impacted by the proposal, and significant built heritage resources and significant cultural heritage resources are conserved.

7.5 Description of Surrounding Land Uses

Lands surrounding the Subject Site consist of agricultural lands to the west and north of the Subject Site, the Toronto at Osprey Valley Golf Course is located to the northeast, the NEC lands and the Hamlet of Cataract are located to the south, and the Credit River is located approximately 125 m to the east/southeast of the Subject Site (**Figure 1: Location Plan of Subject Site**).

The location of the CBM Caledon Pit / Quarry Site is north of the Hamlet of Cataract, which is located in just north of the Forks of the Credit Provincial Park. This neighbourhood consists of a few dozen houses and a single street. Neighbourhood landmarks include the Forks of the Credit Inn also known as the Cataract Inn and the Elora Cataract Trailway. Cataract is currently surrounded by conservation lands and farmland. Toronto at Osprey Valley Golf Course is just north of this neighbourhood, and north of the Subject Site

There are approximately 36 hectares located south of the Site, adjacent to the Hamlet of Cataract (**Figure 2: CBM Additional Lands**) which are owned/controlled by CBM and for which CBM is proposing to create an upland forest and meadow grassland on. As well, CBM is exploring the potential of conveying these lands permanently to a public authority for long term protection. This proposed upland forest and meadow on the lands owned/controlled by CBM (separating the Site from Cataract), coupled with the proposed buffers and setbacks around the perimeter of the Site, provides good separation and screening from Cataract, other existing rural residences, existing farms and major public roads.

Figure 8: Surrounding Pits and Quarries is a figure taken from the Town's Rehabilitation Master Plan (March 2021) and illustrates existing and surrendered pits and quarries in vicinity of the Subject Site. It should be noted that this figure depicts aggregate sites that are in varied states of extraction, from proposed licences to active ARA licenced sites. This figure is helpful in identifying the presence, production and utilization of the resource in vicinity of the Subject Site. From a social perspective, aggregate extraction has been a longstanding use in this community for many years. Furthermore, impact assessments related to air quality, blasting, visual and noise have been completed and have concluded that with the implementation of the recommended mitigation and monitoring requirements in each technical report, the proposed CBM Caledon Pit / Quarry can be operated in accordance with provincial guidelines, standards and procedures.

The surrounding road network includes Charleston Sideroad, Main Street and Highway 10 (further east) which are defined as Major Roads (per the Regional Official Plan) and High Capacity Arterial Roads (per Town of Caledon Official Plan). The proposed haul route will utilize Charleston Sideroad and Highway 10, which are existing and identified haul routes in the Town of Caledon. With the implementation of the recommendations from the traffic report, the proposed truck traffic from the CBM Pit / Quarry will not have unacceptable impacts on the safe and efficient use of the road network. As well, these roads will allow for the resource to be transported to market easily and this makes the proposed location of the CBM Caledon Pit / Quarry a good location from the perspective of servicing the GTA market and meeting growth requirements.

8.0 REHABILITATION PLAN

In accordance with the requirements of the ARA Provincial Standards, the extracted area in the CBM Caledon Pit / Quarry will be progressively rehabilitated, as outlined on the Site Plans (**Figure 9: Final Rehabilitated Landform and Ecological Enhancement Areas**). The progressive and final rehabilitation of an aggregate operation involves the management of the property's natural environment during and after the extraction process. Specifically, after gravel or bedrock is extracted in an area of a pit or quarry, progressive rehabilitation procedures are implemented.

The post-extraction rehabilitation plan has been designed to fit into the overall regional context and complement the existing topography and terrestrial and aquatic features existing and envisioned for, in the area. Because the extraction is below-water, the overall final rehabilitation plan will consist of three separate lakes in each of the North, Main and South extraction areas surrounded by nearshore, riparian, and upland habitats. Proposed rehabilitation of the extraction area will proceed progressively through each phase.

As noted in the Natural Environment Report, the shoreline of the lakes will be contoured, where possible to create convoluted or irregular shoreline gradients. Where sloping and excavation depths allow, shoals or islets will be created to increase habitat diversity. Stumps and logs will be placed along the shoreline as habitat structure. Boulders and rock rubble from the extraction will also be used for habitat structure. These types of structures will provide suitable areas for amphibian breeding, bird perching, waterfowl nesting, fish habitat, and turtle basking.

It is noted that quarried areas will be progressively backfilled with overburden that has been sloped to a minimum 2:1 (horizontal to vertical) to facilitate the final rehabilitation of each phase. The materials in the berms and stockpiles on the perimeter of the Site will be redistributed in the adjacent quarried areas for the final rehabilitation of the site.

As extraction will occur below the water table it would not be feasible to rehabilitate the lands back to agricultural condition therefore three lakes will be created which, when final rehabilitation is completed, will be approximately 158.3 hectares in total area between the Main Area, North Area and South Area. Where possible, some cliff faces will be maintained post-extraction for additional habitat variety at the site. Where possible, the shoreline areas of the lakes will be rehabilitated to wetland habitat through contouring (shallow nearshore slopes) shoreline plantings and inclusion of woody debris to create habitat. Additional native upland planting will be installed in nodes on the site.

As well, a total of 67.7 ha of woodland will be planted off-Site (15.5 ha) and on-Site through rehabilitation (52.2 ha) to replace forest lost through the proposed extraction and to create connections between the rehabilitated habitat and those off-Site. The forest will be planted in two main blocks located in the main extraction area and to the south of the south extraction area. The forest block in the main extraction area will include species representative of the woodland communities that will be removed as well as the adjacent existing woodland, to expand the quality and quantity of upland habitat currently available. Species may include sugar maple, American beech, paper birch, white elm, white cedar, balsam fir, eastern hemlock, red maple, trembling aspen, black cherry, alternate-leaved dogwood, gray dogwood, red-osier dogwood. The forest block in the southern parcel will include species representative of the woodland communities that will be removed, such as: sugar maple, American beech, black cherry, American basswood, eastern hop-hornbeam, eastern hemlock, white elm, alternate-leaved dogwood, choke cherry, smooth serviceberry, round-leaved dogwood, and red elderberry. Other species that may be added to

supplement include red oak, white oak, black maple, mountain maple, northern bush honeysuckle, Canada fly honeysuckle, pin cherry, and maple-leaved viburnum. The meadow and forest blocks in the southern parcel will also create a linkage with the Cataract Southwest PSW to the south, providing additional upland habitat to support wildlife using the PSW, and also enhancing erosion controls on the slope adjacent to the PSW.

A total of 27.9 ha of meadow habitat will be created in the north extraction area (7.6 ha) and to the south of the south extraction area, off Site (20.3 ha). The meadow areas will be planted primarily with grass species, as well as forbs or legumes. These meadow areas will provide habitat for eastern meadowlark and bobolink.

The overall goal of the final rehabilitation plan is to create a landform that represents an ecological and visual enhancement and provides future opportunities for conservation, recreational, tourism and water management. Overall, the progressive and final rehabilitation plan for the Subject Site includes the creation of 158.3 hectares of lakes, 7.9 hectares of gradual grades and islands, 4.8 hectares of wetlands, 52.2 hectares of woodlands, 15.8 ha of grasslands, 7.6 ha of meadow, and 15.8 hectares to remain in existing conditions (*Figure 9*). The proposed rehabilitation has been designed to use all of the on-site topsoil and overburden and does not require the importation of additional soils.

Approximately 6.3% of the Site is subject to the Town's approved Rehabilitation Master Plan (RMP). The portion of the Site that is subject to the RMP is located in the northwest portion of the Site, adjacent to Mississauga Road, and the RMP envisions this area as natural heritage and adjacent agriculture. The Final Rehabilitated Landform and Ecological Enhancement Areas Plan for the proposal plans for natural heritage and agriculture in this location and is consistent with the Town's approved RMP.

Approximately 93.7% of the Site is not subject to the Town's approved Rehabilitation Master Plan (RMP). The proposed rehabilitation plan envisions natural heritage ecological enhancements, including lakes, wetlands, woodlands, grasslands and meadows, and therefore the Plan is generally consistent with the vision for surrounding lands presented in the RMP.

Overall, the proposed final rehabilitation plan is compatible with the surrounding lands through the creation of natural lake features, forest and meadow areas, environmental linkages, and adding a variety of landform features that will complement and benefit the existing community.

9.0 PLANNING AND LAND USE CONSIDERATIONS

The following sections demonstrate the proposed CBM Caledon Pit / Quarry's consistency with the Provincial Policy Statement (2020) and conformity with the A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2020), The Greenbelt Plan (2017), and the Region of Peel Official Plan (2020). This section also outlines why the proposed amendments to the Town of Caledon Official Plan and Zoning By-Law conform to the Town's Official Plan (2018).

9.1 Growth Plan for the Greater Golden Horseshoe (2020)

The Growth Plan for the Greater Golden Horseshoe (The Growth Plan) was prepared and approved under the Places to Grow Act, 2005 to take effect on May 16, 2019. Amendment 1 (2020) to the Growth Plan for the Greater Golden Horseshoe was approved by the Lieutenant Governor in Council on August 28, 2020.

The Growth Plan is a dynamic plan focussed on planning for growth and diverse economies, as well as social and economic diversity. A balanced approach to the wise use and management of all resources, including those related to water, natural heritage, agriculture, cultural heritage and mineral aggregates is inherent in this Plan.

Section 4.1 of the Growth Plan provides the following context for the proposed CBM Caledon Pit / Quarry:

“The GGH contains a broad array of important hydrologic and natural heritage features and areas, a vibrant and diverse agricultural land base, irreplaceable cultural heritage resources, and valuable renewable and non-renewable resources. These lands, features and resources are essential for the long term quality of life, economic prosperity, environmental health, and ecological integrity of the region. They collectively provide essential ecosystem services, including water storage and filtration, cleaner air and habitats, and support pollinators, carbon storage, adaptation and resilience to climate change.”

Related to mineral aggregate resources, this section notes:

“Building compact communities and the infrastructure needed to support growth requires significant mineral aggregate resources. The Aggregate Resources Act establishes the overall process for the management of mineral aggregate operations, and this Plan works within this framework to provide guidance on where and how aggregate resource extraction can occur, while balancing other planning priorities. The GGH contains significant deposits of mineral aggregate resources, which require long term management, including aggregate reuse and recycling. Ensuring mineral aggregate resources are

available in proximity to demand can support the timely provision of infrastructure and reduce transportation-related greenhouse gas emissions.”

Section 1.2.3 in the Growth Plan provides clarity on how this Plan informs decision making regarding growth and environmental protection in the Greater Golden Horseshoe (GGH). The section acknowledges that this Plan must be read in conjunction with other Provincial Plans, including the Greenbelt Plan. As well, it is noted that this Plan builds upon the policy foundations provided by the Provincial Policy Statement (PPS) and that this Plan is to be read in conjunction with the PPS.

It is also noted in Section 1.2.3 the following:

“Within the Greenbelt Area, policies of this Plan that address the same, similar, related, or overlapping matters as the Greenbelt Plan, the Oak Ridges Moraine Conservation Plan, or the Niagara Escarpment Plan do not apply within that part of the Greenbelt Area covered by the relevant plan except where the policies of this Plan, the Greenbelt Plan, the Oak Ridges Moraine Conservation Plan, or the Niagara Escarpment Plan provide otherwise.”

The CBM Caledon Pit / Quarry is located within the Greenbelt Plan and accordingly, the policies of the Greenbelt Plan are addressed in this Planning Justification Report. Specifically, this proposal is subject to the policies of the Greenbelt Plan and since the policies in the Greenbelt Plan address the same, similar, related or overlapping matters of the Growth Plan, the planning rationale for the proposed CBM Caledon Pit / Quarry is covered in the Greenbelt Plan Section of this report.

9.2 Greenbelt Plan (2017)

The Greenbelt Plan is a senior plan in the Province and was established under Section 3 of the Greenbelt Act, 2005, and originally took effect on December 16, 2004. The Greenbelt Plan was most recently amended on July 1, 2017. The Greenbelt Plan identifies where urbanization should not occur in order to provide permanent protection to the agricultural land base and the ecological features and functions occurring on the landscape, and recognizes the significance and importance of natural resources, including aggregate resources. The Greenbelt Plan, together with the Growth Plan, the Niagara Escarpment Plan (NEP) and the Oak Ridges Moraine Conservation Plan (ORMCP), builds on the Provincial Policy Statement (PPS) to establish a land use planning framework for the Greater Golden Horseshoe (GGH) that supports a thriving economy, a clean and healthy environment and social equity.

The Subject Site is located within the ‘Protected Countryside’ designation of the Greenbelt Plan, with areas along the northern limit and eastern limit within the ‘Natural Heritage System’ overlay (**Figure 12: Excerpt of Greenbelt Plan (2017)**). Section 1.2 of the Greenbelt Plan presents the Plan’s vision and goals, including the following:

“1.2.1 Vision

The Greenbelt is a broad band of permanently protected land which:

- *Provides for a diverse range of economic and social activities associated with rural communities, agriculture, tourism, recreation and resource uses*

1.2.2 Protected Countryside Goals

To enhance our urban and rural areas and overall quality of life by promoting the following matters within the Protected Countryside:

2. Environmental Protection

a) Protection, maintenance and enhancement of natural heritage, hydrologic and landform features, areas and functions, including protection of habitat for flora and fauna and particularly species at risk;

c) Protection, improvement or restoration of the quality and quantity of ground and surface water and the hydrological integrity of watersheds; and

d) Provision of long-term guidance for the management of natural heritage and water resources when contemplating such matters as watershed/subwatershed and stormwater management planning, water and wastewater servicing, development, infrastructure, open space planning and management, aggregate rehabilitation and private or public stewardship programs.

3. Culture, Recreation and Tourism

a) Identification, conservation, use and wise management of cultural heritage resources to support the social, economic and cultural wellbeing of all communities, including First Nations and Métis communities;

5. Infrastructure and Natural Resources

a) Support for infrastructure which achieves the social and economic aims of the Greenbelt Plan and the Growth Plan and improves integration with land use planning while seeking to minimize environmental impacts;

b) Recognition of the benefits of protecting renewable and nonrenewable natural resources within the Greenbelt; and

c) Provision for the availability and sustainable use of those resources critical to the region's social, environmental, economic and growth needs.”

The proposal to establish the CBM Caledon Pit / Quarry considers the Greenbelt Plan goals for the Protected Countryside related to environment protection, culture, recreation and tourism, and infrastructure and natural resources. The technical studies completed in connection with the proposal summarize all natural heritage features and their functions found on Site and off-Site and assess how each can be protected, improved upon/enhanced, or restored through the proposed establishment of the aggregate operation.

All cultural heritage resources on Site and on surrounding lands have been identified and it is confirmed that surrounding cultural heritage landscapes and built heritage resources will not be impacted by the proposed Caledon Pit/Quarry. The majority of the Site does not include significant built heritage resources and significant cultural heritage landscapes; however, portions of five listed (not designated) or inventoried heritage properties are located within the Subject Site and may contain heritage potential. Prior to any site alteration or extraction within these areas, a Heritage Impact Assessment (HIA) is required which should include a full evaluation of the property, identify all heritage attributes and direct and indirect impacts, and recommend site-specific mitigation measures to ensure the heritage interest and attributes of the property are conserved in accordance with provincial requirements. As well, until the site specific mitigation measures of the HIA are implemented, a 50 m construction buffer shall be established to reduce the risk of accidental damage from vehicles, heavy equipment operation, or other activities of the mineral aggregate operation. As well, until the site specific mitigation measures of the HIA are implemented, the licensee shall implement the recommendations of the blast impact assessment related to the areas of cultural heritage potential to ensure the structural integrity of the built heritage resources are maintained.

As well, the protection and availability of the aggregate resource on Site is discussed in the technical reports and evaluations of how the resource can be made available without negative environmental, social, economic or growth impacts is assessed and recommendations and mitigation are provided in each report.

Section 3 of the Greenbelt Plan contains policy directives for geographic-specific areas within the Protected Countryside, as follows:

3.1 Agricultural System

3.1.1 Description

...The delineation of the Agricultural System is guided by a variety of factors, including a land evaluation area review (LEAR), which assesses such matters as soils, climate, productivity and land fragmentation; the existing pattern of agriculturally protected lands set out in official plans; the availability of infrastructure, services and assets important to the viability of the agri-food sector and a consideration of projected future growth patterns...

Prime agricultural areas are those lands designated as such within official plans to permanently protect these areas for agriculture....”

The proposed CBM Caledon Pit / Quarry is predominantly located in a prime agricultural area and pursuant to Provincial policy, an agricultural impact assessment was completed. The PPS defines prime agricultural areas as areas where prime agricultural lands predominate. Prime agricultural lands include specialty crop areas and Canada Land Inventory (CLI) Classes 1, 2 and 3 soils, in this order of priority for protection. The Region of Peel Official Plan (2022) maps the portion of the Subject Site west of Main Street as ‘Prime Agricultural Area’ on Schedule D-1 (Rural System) in the Region’s Official Plan (**Figure 7: Excerpt Schedule D-1 Region of Peel (Rural System)**). Lands east of Main Street are designated “Rural Lands”. The Agricultural Impact Assessment confirms that approximately 45% of the Subject Site contains prime agricultural lands (consisting of CLI Class 2) and the majority / balance, consisting of approximately 55% of the Subject Site, consists of non-prime agricultural lands (i.e. CLI Classes 4 and 5).

For lands falling within prime agricultural areas of the Protected Countryside, the following policies shall apply:

“3.1.3.3. Non-agricultural uses may be permitted subject to the policies of sections 4.2 to 4.6. These uses are generally discouraged in prime agricultural areas and may only be permitted after the completion of an agricultural impact assessment.

3.1.3.5. Where agricultural uses and non-agricultural uses interface, land use compatibility shall be achieved by avoiding or, where avoidance is not possible, minimizing and mitigating adverse impacts on the Agricultural System, based on provincial guidance. Where mitigation is required,

measures should be incorporated as part of the non-agricultural uses, as appropriate, within the area being developed.”

The Agricultural Impact Assessment (AIA) completed for the CBM Caledon Pit / Quarry concludes that the majority of the Subject Site contains non-prime agricultural lands (consisting of CLI Class 4 and 5 soils) and that there are no alternate locations within the HPMARA lands which would be a more reasonable choice of location which would utilize lower priority agricultural lands. As well, it is concluded in the AIA that with the implementation of the recommended mitigation measures, the proposed CBM Caledon Pit / Quarry operation will have minimal effect on the surrounding agricultural land uses. Specifically, the proposed CBM Caledon Pit/Quarry will utilize existing haul routes, noise, vibration, and dust will be kept to at or below provincial standards, and no additional net impacts to agriculture are anticipated.

Section 3.2 of the Greenbelt Plan contains policy directives for the natural system. The natural system is made up of a Natural Heritage System and a Water Resource System that often coincide given ecological linkages between terrestrial and water-based functions. As noted above, the northern and eastern portions of the Subject Site contain Natural Heritage System overlay pursuant to the Greenbelt Plan. While portions of the proposed extraction area encroach into the Natural Heritage System, overall, this area has been delineated to avoid and protect adjacent significant natural features. The following policies are applicable to the portion of the proposed CBM Caledon Pit / Quarry which includes the Natural Heritage System:

“3.2.2 For lands within the Natural Heritage System of the Protected Countryside, the following policies shall apply:

3. New development or site alteration in the Natural Heritage System (as permitted by the policies of this Plan) shall demonstrate that:

a) There will be no negative impacts on key natural heritage features or key hydrologic features or their functions;

b) Connectivity along the system and between key natural heritage features and key hydrologic features located within 240 metres of each other will be maintained or, where possible, enhanced for the movement of native plants and animals across the landscape;

c) The removal of other natural features not identified as key natural heritage features and key hydrologic features should be avoided. Such features should be incorporated into the planning and design of the proposed use wherever possible;”

As shown on **Figure 12**, the northern and eastern limits of the Subject Site are within the Natural Heritage System overlay of the Greenbelt Plan. These locations do not include significant woodlands or significant habitat of endangered and threatened species habitat, and are immediately abutting woodland B and woodland D, which are both identified in the Natural Environment Report as off-site significant woodlands, recognized to be within the Greenbelt Plan NHS. It is confirmed in the Natural Environment Report that these features are not present within the limits of the Subject Site. It is further confirmed that extraction may occur adjacent to significant woodlands where an appropriate Vegetative Protection Zone (VPZ) is implemented, and it is noted that extraction will be set back a minimum of 15 m from woodlands B and D and a VPZ of 10 m will be implemented.

Section 3.2.4 contains policy directives related to key hydrologic areas, as follows:

“3.2.4 Key Hydrologic Areas

Key hydrologic areas are areas which contribute to the hydrologic functions of the Water Resource System. These areas maintain ground and surface water quality and quantity by collecting, storing and filtering rainwater and overland flow, recharge aquifers and feed downstream tributaries, lakes, wetlands and discharge areas. These areas are also sensitive to contamination and feed key hydrologic features and drinking water sources.

Key hydrologic areas include:

- *Significant groundwater recharge areas;*
- *Highly vulnerable aquifers; and*
- *Significant surface water contribution areas.*

As illustrated on **Figure 13: Excerpt from Region of Peel Official Plan Schedule A-1: Water Resource Systems Features and Functions**, there is an identified tributary feature in the northwest portion of the Site which is inside the licence area but outside the extraction boundary, and will be protected. The proposed extraction area does not contain any identified water resources.

As shown on **Figure 14: Excerpt from Region of Peel Official Plan Schedule A-2: Highly Vulnerable Aquifers**, a small portion of Main Area, a very small portion of the North Area and the majority of the South Area is mapped as a Highly Vulnerable Aquifer in the Region of Peel Official Plan. This is very common for mineral aggregate resource areas, and based on the design of the operation, and the implementation of the recommendations contained in this report, the proposed Caledon Pit / Quarry does not result in a risk to the aquifer.

As shown on **Figure 15: Excerpt from Region of Peel Official Plan Schedule A-3: Significant Groundwater Recharge Area**, almost all of the Rural Area in the Region of Peel including the Main Area, North Area and South Area are mapped as a Significant Groundwater Recharge Area

in the Region of Peel Official Plan. This is very common for mineral aggregate resource areas, and based on the design of the operation, and the implementation of the recommendations contained in this report, the groundwater recharge function of the area will be maintained.

Section 3.2.5 contains policy directives related to key natural heritage features (KNHFs) and key hydrologic features (KHF), as follows:

“3.2.5 Key Natural Heritage Features and Key Hydrologic Features Policies

Key natural heritage features include:

- *Habitat of endangered species and threatened species;*
- *Fish habitat;*
- *Wetlands;*
- *Life science areas of natural and scientific interest (ANSIs);*
- *Significant valleylands;*
- *Significant woodlands;*
- *Significant wildlife habitat (including habitat of special concern species);*
- *Sand barrens, savannahs and tallgrass prairies; and*
- *Alvars.*

Key hydrologic features include:

- *Permanent and intermittent streams;*
- *Lakes (and their littoral zones);*
- *Seepage areas and springs; and*
- *Wetlands.*

For lands within a key natural heritage feature or a key hydrologic feature in the Protected Countryside, the following policies shall apply:

1. Development or site alteration is not permitted in key hydrologic features and key natural heritage features within the Natural Heritage System, including any associated vegetation protection zone, with the exception of:

- c) Infrastructure, **aggregate**, recreational, shoreline and existing uses, as described by and subject to the policies of section 4.*

As noted above, aggregate operations may be a permitted use within a KHNF or a KHF within the Protected Countryside. As noted in the Natural Environment Report, the following KNHF were identified on the Site, within the extraction limit, but outside of the Natural Heritage System limits:

- SAR habitat (little brown myotis, eastern small-footed myotis, bobolink, eastern meadowlark)

Within the Greenbelt Plan NHS, mineral aggregate operations are prohibited within habitat of endangered or threatened species. Outside of the Greenbelt Plan NHS, KNHFs within the Greenbelt Protected Countryside (which overlaps the Site and extraction limit) are subject to the policies of the PPS. All SAR habitat identified within the extraction limit is located within the Greenbelt Protected Countryside and outside of the Greenbelt Plan NHS. The PPS permits development within habitat of endangered or threatened species in accordance with provincial or federal requirements.

The Natural Environment Report confirms that although SAR habitat was identified on the Site for little brown myotis and eastern small-footed myotis (woodlands F and G) and bobolink and eastern meadowlark (pastures northeast of Charleston Sdrd. and Mississauga Road), these are not considered significant habitat of endangered or threatened species because woodlands F and G were assessed to be part of a roost network, but not a primary roosting area and, specifically, are not relied on as a critical resource for survival and reproduction. Further, the field supporting bobolink and eastern meadowlark are agricultural fields that are actively used for livestock and may also be planted in crop during some years. Accordingly, the fields are considered agricultural and do not represent a permanent or significant habitat for these grassland birds.

The wetland referred to as Unit #2 in the Natural Environment Report, which is located on Site and inside of the proposed excavation area, was determined not to be a wetland and accordingly, could not be assessed further. Mineral aggregate extraction may be permitted within non-significant wetlands where it is demonstrated the feature can be replaced. Further, wetland Unit #1 is located on Site and outside the proposed extraction area, but was found to not meet the size criterion, and no significant ecological functions were identified. It is proposed that Unit #1 (0.1 ha) will be removed to construct a berm; however, a total of 4.8 ha of wetland area will be created during rehabilitation.

As well, in the Natural Environment Report, the following KHNF and KHFs were identified on the Site, outside of the extraction limit:

- Fish habitat (Tributary #1)
- Wetlands (unevaluated wetland Units #1, 3, 4)

Tributary #1 is located on Site but outside of the proposed extraction area. It is noted in the Natural Heritage Report that Tributary #1 and the Credit River drain into an area more than 125 ha and, accordingly, mineral aggregate extraction is prohibited within these features. Further, extraction adjacent to these features must demonstrate no negative impacts and the quality and quantity of surface water entering these features is to be maintained. It is confirmed that extraction will be set back a minimum of 30 m from Tributary #1 and a VPZ of 10 m will be implemented. It is noted that with the implementation of best management practices and mitigation measures and enhancement during progressive rehabilitation set out in the Natural Environment Report, no negative impacts on Tributary #1 are expected during the proposed extraction.

Wetland Units #1, 3, 4 and 5 are located on Site but outside the extraction area. Wetland Unit #1 was determined to not meet the size criterion, and no significant ecological functions were identified. This wetland Unit #1 consist of 0.1 ha and is proposed to be removed for the constriction of a berm; however, equivalent or more area/habitat is to be recreated through rehabilitation plan. Extraction will be set back a minimum 30 m from Units #3, 4 and 5, and from the Coulterville Wetland Complex, and a 10 m VPZ will be implemented. It is noted in the Natural Environment Report that with the implementation of best management practices and mitigation measures and enhancement during progressive rehabilitation set out in the Natural Environment Report, no negative impacts on Other Wetlands are expected during the proposed extraction.

It is also confirmed in the Natural Environment Report that the Credit River and the Coulterville Wetland Complex are considered key hydrologic features located off-site. There are no key hydrologic features located within the proposed extraction area. Taking into consideration the rehabilitation plan, there are 4.8 ha of wetland to be created and 158.3 ha lake to be created, resulting in 163.1 ha of new key hydrologic features.

Importantly, Section 3.2.5.2 and 3.2.5.3 have the following policies for lands beyond the Natural Heritage System within the Protected Countryside, which applies to the majority of the Subject Site, as follows:

- “3.2.5.2. *Beyond the Natural Heritage System within the Protected Countryside, key hydrologic features are defined by and subject to the policies of section 3.2.5.*

- 3.2.5.3. *Beyond the Natural Heritage System within the Protected Countryside, key natural heritage features are not subject to the policies of section 3.2.5, but are to be defined pursuant to, and subject to the policies of, the PPS.”*

As noted above, all SAR habitat identified within the extraction limit is located within the Greenbelt Protected Countryside and outside of the Greenbelt Plan NHS. The PPS permits development within habitat of endangered or threatened species in accordance with provincial or

federal requirements. Further, it is noted above that the woodlands (F and G) supporting the SAR bat habitat on Site are not considered significant habitat of endangered or threatened species because they were assessed to be part of a roost network, but not a primary roosting area and, specifically, are not relied on as a critical resource for survival and reproduction. Further, the field supporting bobolink and eastern meadowlark are agricultural fields that are actively used for livestock and may also be planted in crop during some years. Accordingly, the fields are considered agricultural and do not represent a permanent or significant habitat for these grassland birds.

“3.2.5.5. A proposal for new development or site alteration within 120 metres of a key natural heritage feature within the Natural Heritage System or a key hydrologic feature anywhere within the Protected Countryside requires a natural heritage evaluation or a hydrological evaluation which identifies a vegetation protection zone which:

a) Is of sufficient width to protect the key natural heritage feature or key hydrologic feature and its functions from the impacts of the proposed change and associated activities that may occur before, during and after construction and, where possible, restore or enhance the feature and/or its function; and

b) Is established to achieve and be maintained as natural self-sustaining vegetation.”

The Natural Environment Report and Water Report Level 1/2 outline that the design of the proposed CBM Caledon Pit/Quarry will protect, improve and restore key natural heritage features, and will protect, improve and restore key hydrologic features. Specifically, it is noted that the application includes detailed monitoring and reporting requirements to ensure ongoing verification that adjacent sensitive groundwater features and sensitive surface water features will be protected, improved or restored and that with the implementation of the recommendations in this report, sensitive surface water features and sensitive groundwater features will be protected, improved and restored during operations. As well, taking into account rehabilitation, there will be a long term enhancement to the water resources system and features and the design of the operation and the proposed rehabilitation and ecological enhancement plan will maintain and enhance connectivity between key natural features and key hydrologic features and will enhance the natural environment.

Section 4.1.1 contains general policy directives for non-agricultural uses, including the following:

“4.1.1 General Non-Agricultural Use Policies

For non-agricultural uses, the following policies apply:

1. *Non-agricultural uses are not permitted in the specialty crop areas as shown on Schedule 2 and Schedule 3 of this Plan or within prime agricultural areas in the Protected Countryside, with the exception of those uses permitted under sections 4.2 to 4.6 of this Plan.”*

Importantly, permissions and policies for non-renewable resources, including mineral aggregate operations, are contained within Section 4.3.2 of the Greenbelt Plan and, accordingly, are permitted within prime agricultural areas in the Protected Countryside. Policy directives from Section 4.3.2 for non-renewable resources within the Protected Countryside are noted below:

“4.3.2 Non-Renewable Resource Policies

For lands within the Protected Countryside, the following policies shall apply:

1. *Non-renewable resources are those non-agriculture-based natural resources that have a finite supply, including mineral aggregate resources. Aggregates, in particular, provide significant building materials for our communities and infrastructure, and the availability of aggregates close to market is important for both economic and environmental reasons.*
2. *Activities related to the use of non-renewable resources are permitted in the Protected Countryside, subject to all other applicable legislation, regulations and official plan policies and by-laws. The availability of mineral aggregate resources for long-term use shall be determined in accordance with the PPS, except as provided below.*
3. *Notwithstanding the policies of section 3.2, within the Natural Heritage System, mineral aggregate operations and wayside pits and quarries are subject to the following:*
 - a) *No new mineral aggregate operation and no new wayside pits and quarries, or any ancillary or accessory use thereto, shall be permitted in the following key natural heritage features and key hydrologic features:*

- i. *Significant wetlands;*
- ii. *Habitat of endangered species and threatened species; and*
- iii. *Significant woodlands, unless the woodland is occupied by young plantation or early successional habitat (as defined by the Ministry of Natural Resources and Forestry). In this case, the application must demonstrate that sections 4.3.2.6 (b), (c) and 4.3.2.7 (c) have been addressed and that they will be met by the operation'*

As noted in the Natural Environment Report, there are no PSWs or evaluated non-significant wetlands on the Site. The Cataract Southwest PSW is located 420 m south of the Site, and the evaluated non-significant Coulterville Wetland Complex is located immediately north of the Site but is specifically off Site. As well, as already noted, all SAR habitat identified within the extraction limit is located within the Greenbelt Protected Countryside and outside of the Greenbelt Plan NHS. The PPS permits development within habitat of endangered or threatened species in accordance with provincial or federal requirements. Further, it is noted above that habitat noted to be on Site is not considered to be significant habitat of endangered or threatened species. Accordingly, mineral aggregate extraction is permitted in these areas.

As well, the Natural Environment Report assessed all woodlands on Site and in the study area for significance according to the provincial criteria and confirms that there are no significant woodlands on the Site. Off-Site, four woodlands (B, D, E and H) were identified as significant. Woodlands B and D are located within the Greenbelt NHS to the north and east, and woodlands E and H are located to the southeast and south, within the NEP area.

It is noted in the Natural Environment Report that with the implementation of best management practices and mitigation measures, as well as enhancements (i.e., setback plantings) and the proposed creation of a net gain in woodland area during progressive and final rehabilitation, no negative impacts on significant woodlands or High Functioning Woodlands, or Other Woodlands or Supporting Woodlands are expected as a result of the proposed extraction.

4.3.2.3 b) *Any application for a new mineral aggregate operation shall be required to demonstrate:*

- i. *How the connectivity between key natural heritage features and key hydrologic features will be maintained before, during and after the extraction of mineral aggregates;*

- ii. *How the operator could replace key natural heritage features and key hydrologic features that would be lost from the site with equivalent features on another part of the site or on adjacent lands;*
- iii. *How the Water Resource System will be protected or enhanced; and*
- iv. *How any key natural heritage features and key hydrologic features and their associated vegetation protection zones not identified in section 4.3.2.3 (a), will be addressed in accordance with sections 4.3.2.6 (b), (c) and 4.3.2.7 (c); and*

The Natural Environment Report confirms that no negative impacts to the significant natural heritage features and functions in the study area are expected and that the ecologically based rehabilitation plan and preventative measures proposed will enhance the natural heritage system. Recommendations contained in the Natural Environment report include implementing a 30 m setback from Tributary #1, the Coulterville Wetland Complex, and wetland Units #3, 4 and 5, along with a 10 m VPZ to each feature. As well, protection of off Site significant woodlands will be assured through a minimum setback of 15 m from the limit of extraction to all significant woodlands, including a 10 m VPZ.

In terms of replacement of key natural heritage features and key hydrologic features lost through extraction, the application results in the removal of 22.2 ha of key natural heritage features and key hydrologic (i.e. non significant wetland and habitat of endangered and threatened species) that are permitted to be removed in accordance with applicable policies. Taking into account the proposed rehabilitation plan and the off-Site ecological enhancement plan, the application results in the creation of 100.4 ha of new key natural heritage features (i.e. meadow, wetland, woodland) and 163.1 ha of new key hydrologic features (i.e. lake and wetland) and the lake is also considered fish habitat, which is a key natural heritage feature.

With respect to the water resources system, the application includes detailed monitoring and reporting requirements to ensure ongoing verification that adjacent sensitive groundwater features and sensitive surface water features will be protected, improved or restored. With the implementation of the recommendations in this report, sensitive surface water features and sensitive groundwater features will be protected, improved and restored during operations. As well, taking into account rehabilitation, there will be a long term enhancement to the water resources system and features.

4.3.2.4. In prime agricultural areas, applications for new mineral aggregate operations shall be supported by an agricultural impact assessment and, where possible, shall seek to maintain or improve connectivity of the Agricultural System.

An Agricultural Impact Assessment (AIA) was completed and confirms that the proposed CBM Caledon Pit / Quarry is predominantly located in a prime agricultural area. Prime agricultural lands include specialty crop areas and Canada Land Inventory (CLI) Classes 1, 2 and 3 soils, in this order of priority for protection. The Region of Peel Official Plan (2022) maps the portion of the Subject Site located west of Main Street as ‘Prime Agricultural Area’ and the portion of the Site located east of Main Street as “Rural Lands” on Schedule D-1 (Rural System) in the Region’s Official Plan (**Figure 7: Excerpt Schedule D-1 Region of Peel (Rural System)**). It should be noted, however, that the AIA confirms that the majority of the Site (approximately 55%) consists of non-prime agricultural lands (i.e. CLI Classes 4 and 5) and approximately 45% of the Subject Site contains prime agricultural lands (consisting of CLI Class 2).

Within the Subject Site, the application proposes removal of 119.18 ha (45.41% of Subject Site) of CLI Class 2 lands. Planning policy permits aggregate extraction within prime agricultural areas, on prime agricultural lands, and does not require rehabilitation back to agricultural when certain tests have been met, including when there is a substantial quantity of mineral aggregate resources below the water table proposed for extraction. The AIA addresses these requirements and concludes that rehabilitation of the Site back to agricultural is not required.

With the implementation of the recommended mitigation measures discussed in the AIA, the majority of the potential direct impacts can be minimized and many of the indirect impacts can be avoided or minimized to the extent feasible. The largest impact is the removal of 119.18 ha of prime agricultural land within the Subject Site for which there is no opportunity to avoid. This area will eventually be removed from the agricultural land base as development of the extraction site commences. It has been recommended that those lands not required for immediate extraction and Site preparation be kept in agricultural production for as long as possible.

Rehabilitation is an important consideration and component to any new mineral aggregate resource operation. The Greenbelt Plan has the following policy directives related to rehabilitation:

4.3.2.5. New and existing mineral aggregate operations and wayside pits and quarries within the Protected Countryside shall ensure that:

a) The rehabilitated area will be maximized and disturbed area minimized on an ongoing basis during the life cycle of an operation;

b) Progressive and final rehabilitation efforts will contribute to the goals of the Greenbelt Plan;

c) Any excess disturbed area above the maximum allowable disturbed area, as determined by the Ministry of Natural Resources and Forestry, will be rehabilitated. For new operations, the total disturbed area shall not exceed an established maximum allowable disturbed area; and

d) The applicant demonstrates that the quantity and quality of groundwater and surface water will be maintained as per Provincial Standards under the Aggregate Resources Act.

4.3.2.6. For rehabilitation of new mineral aggregate operation sites in the Protected Countryside, the following policies apply:

a) The disturbed area of a site shall be rehabilitated to a state of equal or greater ecological value and, for the entire site, long-term ecological integrity shall be maintained or enhanced

b) If there are key natural heritage features or key hydrologic features on the site, or if such features existed on the site at the time of an application:

i. The health, diversity and size of these key natural heritage features and key hydrologic features shall be maintained or enhanced; and

ii. Any permitted extraction of mineral aggregates that occurs in a feature shall be completed, and the area shall be rehabilitated, as early as possible in the life of the operation;

c) Aquatic areas remaining after extraction are to be rehabilitated to aquatic enhancement, which shall be representative of the natural ecosystem in that particular setting or ecodistrict, and the combined terrestrial and aquatic rehabilitation shall meet the intent of section 4.3.2.6 (b); and

d) Outside the Natural Heritage System, and except as provided in sections 4.3.2.6 (a), (b) and (c), final rehabilitation shall appropriately reflect the long-term land use of the general area, taking into account applicable policies of this Plan and, to the extent permitted under this Plan, existing

municipal and provincial policies. In prime agricultural areas, the site shall be rehabilitated in accordance with section 2.5.4 of the PPS.

7. *Final rehabilitation for new mineral aggregate operations in the Natural Heritage System shall meet these additional policies:*

b) Where there is extraction below the water table, no less than 35 per cent of the non-aquatic portion of the land subject to each license in the Natural Heritage System is to be rehabilitated to forest cover, which shall be representative of the natural ecosystem in that particular setting or ecodistrict. If the site is also in a prime agricultural area, the remainder of the land subject to the license is to be rehabilitated in accordance with section 2.5.4 of the PPS; and

c) Rehabilitation shall be implemented so that the connectivity of the key natural heritage features and the key hydrologic features on the site and on adjacent lands shall be maintained or enhanced.

8. *Operators are encouraged to consider and provide for public access to former aggregate sites upon final rehabilitation, where appropriate.*

In accordance with the Greenbelt Plan, the extracted area will be progressively rehabilitated, as outlined on the Site Plans (**Figure 9: Rehabilitated Landform and Ecological Enhancement Areas**). The post-extraction rehabilitation plan has been designed to fit into the overall regional context and complement the existing topography and terrestrial and aquatic features in the area. Because the extraction is below-water, it is not feasible to rehabilitate the lands back to agricultural conditions. Rather, the overall final rehabilitation plan will consist of three separate lakes in each of the North, Main and South extraction areas surrounded by nearshore, riparian, and upland habitats. Proposed rehabilitation of the extraction area will proceed progressively through each phase.

As well, the Aggregate Resources Act Site Plans include a maximum disturbed area for the site and an explain how the area is calculated. Throughout the life of the operation CBM must not exceed this maximum allowable disturbed area.

It is noted that approximately 22 ha of the Site are located within the Greenbelt NHS. Of this, the Final Rehabilitated Landform and Ecological Enhancement Areas Plan shows woodlot on approximately 10 ha of that area. This equates to approximately 45% of the land subject to Natural Heritage System within the Site which is to be rehabilitated to forest cover, which is representative of the natural ecosystem, achieving the above noted policy directive.

Habitat variety, including wetland, woodland, meadow and native upland habitats will be incorporated into the rehabilitation plans for the Site. The overall goal of the final rehabilitation plan is to create a landform that represents an ecological and visual enhancement and provides future opportunities for conservation, recreational, tourism and water management. Overall, the progressive and final rehabilitation plan for the Subject Site includes the creation of 158.3 hectares of lakes, 7.9 hectares of gradual grades and islands, 4.8 hectares of wetlands, 52.2 hectares of woodlands, 15.8 ha of grasslands, 7.6 ha of meadow, and 15.8 hectares to remain in existing conditions. The proposed rehabilitation has been designed to use all of the on-Site topsoil and overburden and does not require the importation of additional soils. As well, off Site compensation (outside the licence area) includes 20.3 ha of meadows and 15.5 ha of woodland, both proposed south of the licence area. Below is a Table outlining the habitat / areas to be removed through proposed extraction, and the compensation areas (by feature type) proposed through rehabilitation and off-Site. As noted, through rehabilitation, all areas to be removed will be more than compensated for, through rehabilitation.

Table 1: Areas for Removal and Compensation

Habitat	To Be Removed Within Site (ha)	To be Compensated through Rehabilitation (ha) and off-Site (South of Site)
Non-significant Woodland	18.9	67.7
Wetland	0.1	4.8
SAR Bat Habitat (woodland) <i>(*Note: this is part of the overall non-significant woodland area being removed, not in addition to)</i>	6.3	6.3 +
Bobolink / Eastern Meadowlark Habitat	15.8	27.9 ha

The proposed final rehabilitation plan is compatible with the surrounding lands through the creation of natural lake features, forest and meadow areas, environmental linkages, and adding a variety of landform features that will complement and benefit the existing community.

Section 4.4 contains policy directives related to cultural heritage resources, as follows:

“4.4 Cultural Heritage Resources

For lands within the Protected Countryside, the following policies shall apply:

- 1. Cultural heritage resources shall be conserved in order to foster a sense of place and benefit communities.*

2. *Municipalities shall work with stakeholders, as well as First Nations and Métis communities, in developing and implementing official plan policies and strategies for the identification, wise use and management of cultural heritage resources.”*

The Cultural Heritage Report concludes that surrounding cultural heritage landscapes and built heritage resources will not be impacted by the proposed Caledon Pit/Quarry. It is noted that the majority of the proposed Caledon Pit/Quarry does not include significant built heritage resources and significant cultural heritage landscapes and portions of five listed (not designated) or inventoried heritage properties are located within the proposed Caledon Pit/Quarry and contain cultural heritage potential. The potential heritage attributes within each of these five properties have been identified on the Aggregate Resources Act Site Plans and no site alteration or development is permitted until a Heritage Impact Assessment is completed. It is noted that the HIA should include a full evaluation of the property using the criteria prescribed in O. Reg. 9/06, provide a list of heritage attributes, identify all direct and indirect impacts, and recommend site-specific mitigation measures to ensure the CHVI and heritage attributes of the property are conserved in accordance with provincial requirements. It is concluded that based on the recommendations of the report, significant built heritage resources and significant cultural heritage resources are conserved.

Section 5 of the Greenbelt Plan contains policies related to implementation, as follows:

“5 Implementation

5.3 Municipal Implementation of Protected Countryside Policies

Despite the policies in the Greenbelt Plan, there is nothing in this Plan that limits the ability of decision-makers on planning matters to adopt policies that are more stringent than the requirements of the Plan, unless doing so would conflict with any of the policies or objectives of the Plan. With the exception of the policies of section 4.6, official plans and zoning by-laws shall not, however, contain provisions that are more restrictive than the policies of sections 3.1 and 4.3.2 as they apply to agricultural uses and mineral aggregate resources respectively.”

As noted above, the Greenbelt Plan represents the most restrictive policies related to protection of key natural heritage features and key hydrologic features, as it relates to mineral aggregate resources.

The above analysis demonstrates that the proposed CBM Caledon Pit / Quarry is permitted and will be developed in conformity with the policies for the “Protected Countryside” and “Natural Heritage System” overlay in the Greenbelt Plan.

9.3 Niagara Escarpment Plan (2021 Office Consolidation)

The Niagara Escarpment Plan is a provincial plan which serves as a framework of objectives and policies to strike a balance between development, protection and the enjoyment of this important landform feature and the resources it supports. The Niagara Escarpment Plan, the Oak Ridges Moraine Conservation Plan and the Greenbelt Plan work within the framework set out by the Growth Plan for the Greater Golden Horseshoe to guide land uses and development. Together, these provincial plans build on the Provincial Policy Statement (PPS) to establish a land use planning framework for the Greater Golden Horseshoe and the Greenbelt Plan Area that supports growth and development, preservation and enhancement of all resources, and protection and enjoyment of all resources.

The purpose of the Niagara Escarpment Plan *“is to provide for the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment, and to ensure only such development occurs as is compatible with that natural environment.”*

It is important to note that although CBM owns/controls lands within the Niagara Escarpment Plan area, south of the Subject Site (**Figure 2: CBM Additional Lands**), these lands are not part of the Subject Site and are not proposed for a licence or for extraction as part of CBM’s proposed Caledon Pit / Quarry. Specifically, these lands consist of approximately 36 ha which are being proposed for the creation of an upland forest and meadow grassland, and CBM is exploring the potential of conveying them permanently to a public authority for long term protection. Accordingly, it is useful to review the policy directives contained in the NEP for these lands.

These 36 ha of CBM Additional Lands are partially designated “Minor Urban Centre” (Cataract), and “Escarpment Rural Area” and “Escarpment Protection Area” in the NEP.

“The objectives of the Niagara Escarpment Plan are:

1. *To protect unique ecologic and historic areas;*
2. *To maintain and enhance the quality and character of natural streams and water supplies;*
3. *To provide adequate for outdoor recreation;*
4. *To maintain and enhance the open landscape character of the Niagara Escarpment in so far as possible, by such means as compatible farming or forestry and by preserving the natural scenery;*

5. *To ensure that all new development is compatible with the purpose of the Plan;*
6. *To provide for adequate public access to the Niagara Escarpment; and*
7. *To support municipalities within the Niagara Escarpment Plan Area in their exercise of the planning functions conferred up them by the Planning Act.”*

The 36 ha of land located south of the Subject Site, within the NEP, are currently in agricultural use and are proposed to be protected from aggregate extraction and enhanced from a natural heritage perspective through the creation of an upland forest and meadow grassland. (**Figure 9**). CBM’s commitment to explore conveying these lands permanently to a public authority for long term protection will ensure the protection and enhancement of all ecologic features, and will provide opportunity for maintaining the open landscape character of these lands and may even provide for the opportunity for public access to these lands, if they are conveyed to a public authority.

It should also be noted that the 36 ha within NEC jurisdiction is planned as part of the off-Site Ecological Enhancement Areas Plan (**Figure 9**) to be enhanced ecologically with the meadow and woodland area being created within five years of the licence being issued. This will ensure the lands fit into the overall regional context and complement the existing topography and terrestrial and aquatic features in the area.

The overall goal for the 36 ha of land within NEC jurisdiction is to create a landform that represents an ecological and visual enhancement. There is no development proposed within these southern additional lands and no land use permissions are being sought from the NEC. Preservation of these lands for ecological enhancements and/or eventual conveyance for public use will meet with the objectives for these lands in the NEP. This will specifically contribute to the provision of natural, generous buffers from the proposed CBM Caledon Pit / Quarry to the north.

9.4 Provincial Policy Statement (2020)

On February 28, 2020, the Ministry of Municipal Affairs and Housing released the Provincial Policy Statement, 2020 (the “PPS”) and it came into effect on May 1, 2020. All decisions under the Planning Act, or that affect a planning matter, are required to be consistent with the new PPS.

As set out in the Provincial Policy Statement, 2020 (the “PPS”), Ontario’s long-term prosperity depends on a coordinated approach to wisely managing resources and change and promoting efficient development patterns that result in strong, healthy and complete communities. This is achieved by balancing environmental protection, public health, safety and while protecting resources of public interest.

Where the policies of provincial plans address the same, similar, related, or overlapping matters as the policies of the PPS, applying the more specific policies of the provincial plan satisfies the more general requirements of the PPS, unless it is noted that the PPS prevails. In contrast, where matters addressed in the PPS do not overlap with policies in provincial plans, the policies in the PPS must be independently satisfied.

The proposed CBM Caledon Pit / Quarry is required to be consistent with the requirements and policies of the PPS. The following policy directives are relevant to the proposed CBM Caledon Pit / Quarry:

“1.0 Building Strong Healthy Communities

Ontario is a vast province with urban, rural, and northern communities with diversity in population, economic activities, pace of growth, service levels and physical and natural conditions. Ontario's long-term prosperity, environmental health and social well-being depend on wisely managing change and promoting efficient land use and development patterns. Efficient land use and development patterns support sustainability by promoting strong, liveable, healthy and resilient communities, protecting the environment and public health and safety, and facilitating economic growth.

1.1.1 Healthy, liveable and safe communities are sustained by:

- a) promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term;*
- c) avoiding development and land use patterns which may cause environmental or public health and safety concerns;*
- h) promoting development and land use patterns that conserve biodiversity;*
- i) preparing for the regional and local impacts of changing climate.”*

1.1.4 Rural Areas in Municipalities

Rural areas are a system of lands that may include rural settlement areas, rural lands, prime agricultural areas, natural heritage features and areas, and other resource areas. Rural areas and urban areas are interdependent in terms of markets, resources and amenities. It is important to leverage rural assets and amenities and protect the environment as a foundation for a sustainable economy.

1.1.4.1 Healthy, integrated and viable rural areas should be supported by:

- f) promoting diversification of the economic base and employment opportunities through goods and services, including value-added products and the sustainable management or use of resources;*
- h) conserving biodiversity and considering the ecological benefits provided by nature”...*

The Subject Site is located in a rural area of Caledon. The proposed CBM Caledon Pit / Quarry considers the Site’s locational attributes, proximity to market, the significance of the aggregate resource, and the long term land use vision pursuant to the rehabilitation plans (including ecological enhancements). These attributes and vision align with the PPS rural area policies and make the proposed CBM Caledon Pit / Quarry an appropriate land use consideration for the Subject site.

“1.1.5.2 On rural lands located in municipalities, permitted uses are:

- a) the management or use of resources;*
- b) resource-based recreational uses (including recreational dwellings);*

“1.1.5.3 Recreational, tourism and other economic opportunities should be promoted.”

“1.1.5.4 Development that is compatible with the rural landscape and can be sustained by rural service levels should be promoted.

“1.1.5.7 Opportunities to support a diversified rural economy should be promoted by protecting agricultural and other resource-related uses and directing non-related development to areas where it will minimize constraints on these uses.”

The proposed CBM Caledon Pit/ Quarry is a permitted use on rural lands, pursuant to the PPS. Further, the proposed rehabilitation plan, including the land use vision and ecological enhancements, are permitted and supported by the PPS.

“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.”

As noted, aggregate extraction is an existing land use in this general vicinity of Caledon (**Figure 8**). Further, the Subject Site and lands in the vicinity are identified as HPMARA and CHPMARA in the Regional and local Official Plan, respectively (**Figure 5 and 6**). Accordingly, these are areas in Caledon where mineral resource extraction is anticipated and expected. As a result, the proposed CBM Caledon Pit / Quarry on the Subject Site is appropriate to consider for aggregate extraction. Further, the proposal has been appropriately designed and buffered in the context of noise, air quality, blasting and water to prevent adverse impacts and to minimize public health and safety in accordance with provincial standards, guidelines and procedures.

“1.5.1 Healthy, active communities should be promoted by:

b) planning and providing for a full range and equitable distribution of publicly-accessible built and natural settings for recreation, including facilities, parklands, public spaces, open space areas, trails and linkages, and, where practical, water-based resources;

The overall goal of the proposed rehabilitation plan for the CBM Caledon Pit / Quarry lands is to create a landform that represents an ecological and visual enhancement and provides future opportunities for conservation, ecological enhancement, recreational, tourism and water management. As well, there is opportunity for the additional lands south of the Subject Site, within the NEC (**Figure 2**), to be conveyed permanently to a public authority for long term protection.

“1.6.7 Transportation Systems

1.6.7.2 Efficient use shall be made of existing and planned infrastructure, including through the use of transportation demand management strategies, where feasible.

The proposal will make efficient use of an existing haul route from a close to market location, which has the effect of reducing overall travel distances. A haul route assessment was undertaken to determine the location of the new future Site access for the Caledon Pit / Quarry and assessed several Site access considerations including existing haul route restrictions, impact to existing residents, access spacing requirements in accordance with Region of Peel and TAC guidelines, physical constraints, and safety considerations. It was determined that the preferred location of the proposed Site access is along Charleston Sideroad (Regional Road 24) between Mississauga Road and Main Street (Regional Road 136) / Cataract Road. The proposed truck distribution includes 95% of truck traffic heading east on Charleston Sideroad towards Hurontario Street (with 90% travelling south and 5% travelling north on Hurontario Street) and the remaining 5% truck traffic

heading west on Charleston Sideroad and it is confirmed that the proposed haul route is an existing and identified haul route in the Town of Caledon Official Plan.

1.7 Long-Term Economic Prosperity

1.7.1 Long-term economic prosperity should be supported by:

c) optimizing the long-term availability and use of land, resources, infrastructure and public service facilities;

h) providing opportunities for sustainable tourism development;

k) minimizing negative impacts from a changing climate and considering the ecological benefits provided by nature;”

The Subject Site is mapped HPMARA and CHPMARA in the Regional and local Official Plans (**Fig 5 and 6**), reflecting its importance and significance as an aggregate resource area in Peel. The proposal will optimize the long-term availability of mineral aggregate resources in Peel/Caledon and the Site is located close to market and will be an efficient, cost-effective development that reduces greenhouse gas emissions. The proposal also includes a rehabilitation vision that provides for ecological benefits and may offer opportunities for public access and sustainable tourism opportunities.

Section 2 of the PPS is entitled “Wise Use and Management of Resources”. The introduction of this section is as follows:

“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.”

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.

2.1.3 *Natural heritage systems shall be identified in Ecoregions 6E & 7E, recognizing that natural heritage systems will vary in size and form in settlement areas, rural areas, and prime agricultural areas.*

2.1.4 *Development and site alteration shall not be permitted in:*

- a) *significant wetlands in Ecoregions 5E, 6E and 7E; and*
- b) *significant coastal wetlands.”*

2.1.5 *Development and site alteration shall not be permitted in:*

- a) *significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;*
- b) *significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);*
- c) *significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);*
- d) *significant wildlife habitat;*
- e) *significant areas of natural and scientific interest; and*
- f) *coastal wetlands in Ecoregions 5E, 6E and 7E that are not subject to policy 2.1.4(b)*

unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.”

2.1.6 *Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.*

It is confirmed in the Natural Environment Report that there are no significant wetlands, significant woodlands, significant valleylands, or significant ANSIs on the Site. As well, there is no significant wildlife habitat on Site or fish habitat within the proposed extraction limits.

On Site, outside of the extraction limits, there is Tributary #1 which contains fish habitat. Because these are outside of the proposed extraction area, and with the implementation of the recommended 30 m setback and 10 m VPZ between the proposed to extraction and Tributary #1, the Natural Environment Report confirms that no direct impacts are anticipated.

Off-site, within the study area, there are significant woodlands located to the north, east and south, and there is the Credit River and Cataract Southwest PSW, which contain fish habitat. It is noted in the Natural Environment Report that with the implementation of best management practices and mitigation measures, no net negative impacts on significant or Other Woodlands, or on fish habitat in the Credit River are expected due to the proposed extraction.

2.1.7 Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

As noted earlier, although SAR habitat was identified on the Site for little brown myotis and eastern small-footed myotis (woodlands F and G) and bobolink and eastern meadowlark (pastures northeast of Charleston Sdrd and Mississauga Road), these are not considered significant habitat of endangered or threatened species because woodlands F and G were assessed to be part of a roost network, but not a primary roosting area and, specifically, are not relied on as a critical resource for survival and reproduction. Further, the field supporting bobolink and eastern meadowlark are agricultural fields that are actively used for livestock and may also be planted in crop during some years. Accordingly, the fields are considered agricultural and do not represent a permanent or significant habitat for these grassland birds. No negative impacts are anticipated on these features or their ecological functions.

2.1.8 Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5, and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.”

As noted in the Natural Environment Report, there are no significant wetlands on the Site. Off-Site, the Cataract Southwest PSW is located in the southeast corner of the study area. As well, a portion of the Credit River at Alton PSW is located off-Site, in the north portion of the study area along the Credit River.

The Natural Environment Report confirms that with the implementation of best management practices, mitigation measures, and enhancements during final rehabilitation, no net negative impacts on the Cataract Southwest PSW or Credit River at Alton PSW, or on Other Wetlands are expected due to the proposed extraction.

There are no significant valleylands on the Site. Off-Site, the Credit River valleyland in the north portion of the study area meets the criteria to be considered significant according to the NHRM, however, it is confirmed that with the implementation of best management practices, no negative impacts on significant valleylands are expected due to the proposed extraction.

The Natural Environment Report also confirms there are no ANSIs on the Site. Off-Site, in the southeast corner of the study area, the Caledon Meltwater Deposits – Forks of the Credit Earth Science ANSI is located approximately 400 m south of the Site, but with the implementation of best management practices, no negative impacts on the Caledon Meltwater Deposits – Forks of the Credit Earth Science ANSI are expected due to the proposed extraction.

2.2 Water

2.2.1 *Planning authorities shall protect, improve or restore the quality and quantity of water by:*

d) identifying water resource systems consisting of ground water features, hydrologic functions, natural heritage features and areas, and surface water features including shoreline areas, which are necessary for the ecological and hydrological integrity of the watershed;

e) maintaining linkages and related functions among ground water features, hydrologic functions, natural heritage features and areas, and surface water features including shoreline areas;

f) implementing necessary restrictions on development and site alteration to:

1. protect all municipal drinking water supplies and designated vulnerable areas; and

2. protect, improve or restore vulnerable surface and ground water, sensitive surface water features and sensitive ground water features, and their hydrologic functions;

g) planning for efficient and sustainable use of water resources, through practices for water conservation and sustaining water quality;” ...

On Site there is a 0.1 ha key hydrologic feature (wetland Unit #1), Tributary #1 and wetlands (Units #3, 4 and 5) which are all outside of the extraction area. Wetland Unit #1 will be removed for a berm but will be replaced at a ratio of 48:1 through the rehabilitation plan. Tributary # 1 and wetland Units #3, 4 and 5 will be protected with a 30 m buffer and a 10 m VPZ.

Surface water features off Site include the Credit River Main and Erin Branches to the east and southwest, respectively. It is noted in the Natural Environment Report and in the Water Report Level 1/2 that the Credit River Erin Branch receives the majority of drainage from the Site under existing conditions via Tributary #1 and #8. As well, groundwater levels on Site were confirmed

to vary between +/- 1 m or less annually. The highest groundwater elevations typically occur during late spring / early summer and the lowest groundwater elevation typically occurs during later summer. Groundwater flow is generally described to flow from the northwest to the southeast towards the Credit River. With implementation of the recommendations and detailed monitoring and reporting requirements, ongoing verification that adjacent sensitive groundwater features and sensitive surface water features will be protected, improved or restored during operations is assured. Taking into account rehabilitation, there will be a long-term enhancement to the water resources system and features.

As well, the Water Report Level 1/ 2 confirms that of the approximately 100 water supply wells evaluated in the report, 15 residential wells are considered to have the potential to be impacted during operations by the proposed pit / quarry development. These 15 wells are susceptible to impacts due to their location relative to the predicted zone of influence of the Site, and their relatively shallow well construction in comparison to other wells in the area. In all cases, the wells of potential concern could be deepened to the depth of other wells in the surrounding area to restore the water supply. In the event of a water well complaint there is an established procedure that the licensee must follow which requires an immediate investigation and supply of temporary water if required. If any well was impacted by the proposed pit / quarry operation it is the licensee's responsibility to restore the water supply, at their expense. As part of the operation there will be an extensive on-Site and off-Site groundwater monitoring program and annual reports that will be submitted to the government agencies and publicly available. As a result of the proposed design of the quarry, the comprehensive groundwater monitoring and reporting requirements and the water well complaint procedure, the Water Report Level 1/2 concludes that water supply wells in the surrounding area will be protected.

2.2.2 Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored.

Mitigative measures and/or alternative development approaches may be required in order to protect, improve or restore sensitive surface water features, sensitive ground water features, and their hydrologic functions.

A Water Report Level 1/2 and a Maximum Predicted Water Table Report have been prepared and these reports confirm that detailed monitoring and reporting requirements will ensure that adjacent sensitive groundwater features and sensitive surface water features will be protected, improved or restored, and that with the implementation of the recommendations in the assessment, sensitive surface water features and sensitive groundwater features will be protected, improved and restored during operations. As well, through rehabilitation, there will be a long-term enhancement to the water resources system and features.

“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.

2.3.6 Non-Agricultural Uses in Prime Agricultural Areas

2.3.6.1 Planning authorities may only permit non-agricultural uses in prime agricultural areas for:

a) extraction of minerals, petroleum resources and mineral aggregate resources

2.3.6.2 Impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands are to be mitigated to the extent feasible.”

As noted above, the proposed CBM Caledon Pit / Quarry is located in a prime agricultural area and pursuant to Provincial policy, an agricultural impact assessment was completed. Further, the Agricultural Impact Assessment (AIA) confirms that approximately 45% of the Subject Site contains prime agricultural lands (consisting of CLI Class 2) and the balance, consisting of approximately 55% of the Subject Site, consists of non-prime agricultural lands (i.e. CLI Classes 4 and 5). The AIA concludes that with implementation of the recommended mitigation measures, the proposed CBM Caledon Pit / Quarry operation will have minimal effect on the surrounding agricultural land uses, by utilizing existing haul routes, keeping noise, vibration, and dust at or below provincial standards, and providing assurance that if farm wells are affected, measures are in place to quickly restore an adequate water supply to farming operation(s).

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 As much of the mineral aggregate resources as is realistically possible shall be made available as close to markets as possible.

Demonstration of need for mineral aggregate resources, including any type of supply/demand analysis, shall not be required, notwithstanding the availability, designation or licensing for extraction of mineral aggregate resources locally or elsewhere.

2.5.2.2 Extraction shall be undertaken in a manner which minimizes social, economic and environmental impacts.

Mineral aggregate resources are a matter of provincial interest and are considered to be essential building blocks of the Provincial economy. Aggregate produced in Ontario is used to build highways, local roads, water and sanitary services, schools, hospitals and other public infrastructure.

Aggregates are a non-renewable natural resource found at fixed locations, and Caledon has a plentiful supply of aggregates, including in the vicinity of, and within, the Subject Site. Aggregates are important to our everyday lives and the economy and, accordingly, aggregates are to be protected for future use and should be made available close to the market within which they are to be used. This is partially due to the cost of transporting aggregates long distances, which affects the cost of construction projects. Having to transport long distances also has an effect on greenhouse gases with increased exhaust emissions from the truck traffic. To minimize the delivered cost of aggregate, and to reduce the social/environmental impact of truck haulage, provincial policy requires the resource to be accessed as close to market as possible. The location of the CBM Caledon Pit / Quarry within the GTA which is the primary market, and close to existing, established haul routes along Charleston Sdrd. and Highway 10, demonstrates it is ‘close to market’, pursuant to the PPS.

As well, as noted in the Socio-Economic Assessment, in light of Caledon’s projected population growth and the corresponding need for high-quality dolostone, the implications of importing far-from-market aggregate also needs to be considered. The Ontario Chamber of Commerce report (summarized in the Socio-Economic Report) demonstrated the importance of the aggregate industry for construction, and the economic and environmental impacts of longer haul distances, as well as the many benefits associated with close-to-market aggregate production. The study found that an increase in the haul distance for transporting aggregates from pits and quarries to market can have sizeable economic and environmental implications through increased transportation costs borne by home buyers and governments, and GHG emissions.

For Ontario and Caledon to meet their climate targets, there will be a need to significantly reduce GHG emissions from the transportation sector, which is the leading source of emissions in the province. Close-to-market aggregate production from pits and quarries such as the one proposed in Caledon can cost-effectively reduce emissions from transportation.

Technical reports addressing the natural environment, water resources, cultural heritage resources, visual, agricultural, noise, air quality, blasting, and traffic have been completed and confirm that the design of the proposed CBM Caledon Pit / Quarry will protect and enhance key natural heritage and hydrologic features, conserve cultural heritage resources, and visually screen the extraction area to maintain the open landscape character. As well, the design will protect key hydrologic features located off-Site including the maintenance of the groundwater and surface water quantity and quality, maintain connectivity between key natural features and key hydrologic features, and will minimize and mitigate impacts on agricultural lands and operations. Lastly, the design will minimize impacts on surrounding land uses from a noise, visual, blasting and air quality perspective.

2.5.3 Rehabilitation

2.5.3.1 Progressive and final rehabilitation shall be required to accommodate subsequent land uses, to promote land use compatibility, to recognize the interim nature of extraction, and to mitigate negative impacts to the extent possible. Final rehabilitation shall take surrounding land use and approved land use designations into consideration.

2.5.3.2 Comprehensive rehabilitation planning is encouraged where there is a concentration of mineral aggregate operations.

The proposed CBM Caledon Pit / Quarry is planned to be progressively rehabilitated. The progressive and final rehabilitation of an aggregate operation involves the management of the property's natural environment during and after the extraction process. The post-extraction rehabilitation plan has been designed to fit into the overall regional context and complement the existing topography and terrestrial and aquatic features in the area. Because the extraction is below-water, it is not feasible to rehabilitate the lands back to agricultural conditions. Rather, the overall final rehabilitation plan will consist of three separate lakes in each of the North, Main and South extraction areas surrounded by nearshore, riparian, and upland habitats. Proposed rehabilitation of the extraction area will proceed progressively through each phase.

2.5.4 Extraction in Prime Agricultural Areas

2.5.4.1 In prime agricultural areas, on prime agricultural land, extraction of mineral aggregate resources is permitted as an interim use provided that the site will be rehabilitated back to an agricultural condition.

Complete rehabilitation to an agricultural condition is not required if:

- a) outside of a specialty crop area, there is a substantial quantity of mineral aggregate resources below the water table warranting extraction, or the depth of planned extraction in a quarry makes restoration of pre-extraction agricultural capability unfeasible;*
- a) in a specialty crop area, there is a substantial quantity of high quality mineral aggregate resources below the water table warranting extraction, and the depth of planned extraction makes restoration of pre-extraction agricultural capability unfeasible;*
- b) other alternatives have been considered by the applicant and found unsuitable. The consideration of other alternatives shall include resources in areas of Canada Land Inventory Class 4 through 7 lands, resources on lands identified as designated growth areas, and resources on prime agricultural lands where rehabilitation is feasible. Where no other alternatives are found, prime agricultural lands shall be protected in this order of priority: specialty crop areas, Canada Land Inventory Class 1, 2 and 3 lands; and*
- c) agricultural rehabilitation in remaining areas is maximized.”*

Within the Subject Site, the application proposes removal of 119.18 ha (45.41% of Subject Site) of CLI Class 2 lands. Planning policy permits aggregate extraction within prime agricultural areas, on prime agricultural lands, and does not require rehabilitation back to agricultural when certain tests have been met, including when there is a substantial quantity of mineral aggregate resources below the water table proposed for extraction. The AIA addresses these requirements and concludes that rehabilitation of the Subject Site back to agricultural is not required.

With the implementation of the recommended mitigation measures discussed in the AIA, the majority of the potential direct impacts can be minimized and many of the indirect impacts can be avoided or minimized to the extent feasible. The largest impact is the removal of 119.18 ha of prime agricultural land within the Subject Site for which there is no opportunity to avoid. This area will eventually be removed from the agricultural land base as development of the extraction site commences. It has been recommended that those lands not required for immediate extraction and Site preparation be kept in agricultural production for as long as possible.

“2.6 Cultural Heritage and Archaeology

2.6.1 Significant built heritage resources and significant cultural heritage landscapes shall be conserved.

- 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.*
- 2.6.3 *Planning authorities shall not permit development and site alteration on adjacent lands to protected heritage property except where the proposed development and site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved.*

As noted, the Stage 1 and 2 Archaeological Assessment identified 10 Euro-Canadian sites and 4 Pre-contact Indigenous sites on the Subject Site for which a Stage 3 Assessment has been recommended. For each of these archaeological sites within the Subject Site, it is recommended that these sites are avoided and protected by establishing a 70 m “Archaeological Protection Area” around the extent of each site, until the requisite Stage 3 Assessment is completed (and possibly Stage 4 Mitigation, if necessary). These “Archaeological Protection Areas” have been identified on the ARA Site Plans for the proposed CBM Caledon Pit / Quarry and site alteration is prohibited within these limits until such time as the Stage 3 (and possibly Stage 4) Archaeological Assessments are completed and clear these sites.

The Cultural Heritage Report concludes that surrounding cultural heritage landscapes and built heritage resources will not be impacted by the proposed Caledon Pit/Quarry. It is noted that the majority of the proposed Caledon Pit/Quarry does not include significant built heritage resources and significant cultural heritage landscapes and portions of five listed (not designated) or inventoried heritage properties are located within the proposed Caledon Pit/Quarry and contain cultural heritage potential. The potential heritage attributes within each of these five properties have been identified on the Aggregate Resources Act Site Plans and no site alteration or development is permitted until a Heritage Impact Assessment is completed. It is concluded that based on the recommendations of the report, significant built heritage resources and significant cultural heritage resources are conserved.

Section 3 of the PPS is entitled “Protecting Public Health and Safety.” The introduction to this section reads:

“Ontario's long-term prosperity, environmental health and social well-being depend on reducing the potential for public cost or risk to Ontario's residents from natural or human-made hazards.

Development shall be directed away from areas of natural or human-made hazards where there is an unacceptable risk to public health or safety or of property damage, and not create new or aggravate existing hazards.

Mitigating potential risk to public health or safety or of property damage from natural hazards, including the risks that may be associated with the impacts of a changing climate, will require the Province, planning authorities, and conservation authorities to work together.”

3.1.1 Development shall generally be directed to areas outside of:

- a) hazardous lands adjacent to the shorelines of the Great Lakes -St. Lawrence River System and large inland lakes which are impacted by flooding hazards, erosion hazards and/or dynamic beach hazards;*
- b) hazardous lands adjacent to river, stream and small inland lake systems which are impacted by flooding hazards and/or erosion hazards; and*
- c) hazardous sites.”*

The proposed extraction area does not contain hazardous lands or hazardous sites. Accordingly, the proposal is consistent with this policy directive.

It is concluded that the proposed CBM Caledon Pit / Quarry is consistent with, and is supported by, the Provincial Policy Statement.

9.5 Region of Peel Official Plan (2022)

The Official Plan for the Region of Peel was adopted by Regional Council on April 28, 2022 and was subsequently approved with modifications by the Minister of Municipal Affairs and Housing on November 4, 2022. This recent Official Plan approval resulted from a detailed Municipal Comprehensive Review (MCR) process that spanned several years.

The Regional Official Plan is a broad land use policy document which provides guidance to the area municipalities in the preparation and implementation of their local Official Plans. It is appropriate that this planning justification report provides an overview and assessment of the relationship of the Regional Official Plan to this development proposal.

In the Region of Peel Official Plan, the Subject Site is designated “Prime Agricultural Area” and “Rural Lands” (**Figure 7: Excerpt Region of Peel Official Plan Schedule D-1 Rural System**) and is located within the Region’s High Potential Mineral Aggregate Resource Area (HPMARA) (**Figure 5**). An amendment to the Region of Peel Official Plan is not required to facilitate the proposed CBM Caledon Pit / Quarry.

The relevant sections of the Regional Official Plan and our commentary demonstrating conformity with the Plan follows.

The purpose of the Regional Official Plan is set out in Section 1.1 of the Plan and includes the following:

- *“provide a holistic approach to planning through an overarching sustainable development framework that integrates environmental, social, economic and cultural imperatives;*
- *provide Regional Council with the long-term regional strategic policy framework for guiding growth and development while having regard for protecting the environment, managing the renewable and non-renewable resources, and outlining a Regional Structure that manages this growth in the most effective and efficient manner;*
- *interpret and apply the intent of provincial legislation and policies within a Regional context using the authority delegated or assigned to the Region from the Province;*
- *provide a long-term regional strategic policy framework for the more specific objectives and land use policies contained in the local municipal official plans which must conform to this Plan;*
- *recognize the importance of protecting and enriching the natural and cultural heritage of the Region;*
- *provide for the health and safety of those living and working in the Region;”*

This Plan is the primary long range strategic land use policy document for the Region of Peel. Section 1.4 outlines the relationship between Provincial Policy and the Regional Official Plan and notes that *“the Region of Peel Official Plan is designed to clarify the roles and responsibilities of the Region and the local municipalities by providing regional leadership where value is added and by clearly assigning certain roles to the local municipalities through strong, directive policy language.”*

Overall goals of the Region of Peel Official Plan include the following:

- “1.7.1 To create healthy, resilient, equitable and sustainable regional communities for those living and working in Peel which is characterized by physical, mental, economic and social wellbeing; crime prevention, minimizing hunger and homelessness; a recognition and preservation of the Region's natural and cultural heritage; and an emphasis on the importance of Peel's future as a caring community.*
- 1.7.2 To recognize, respect, preserve, restore and enhance the importance of ecosystem features, functions and linkages, and enhance the environmental well-being of air, water, land resources and living organisms.*
- 1.7.3 To ensure the Region is resilient and adapted to a changing climate and planned in a manner that works towards achieving net zero emissions over time.*
- 1.7.4 To recognize the importance of a vital, competitive and diverse economy and a sound tax base, and manage and stage growth and development in accordance with the financial goals and overall fiscal sustainability of the Region.*
- 1.7.5 To support growth and development which takes place in a sustainable manner, and which integrates the environmental, social, economic and cultural responsibilities of the Region and the Province”*

The proposed CBM Caledon Pit / Quarry supports the concept of achieving a sustainable regional community and ensuring the preservation of natural and cultural environments. The proposal will facilitate access to a needed aggregate resource in a location which is close to market which therefore reduces economic, social and environmental impacts. The proposal will recognize, respect, preserve and restore/enhance significant ecological features, functions and linkages, and impacts on air, noise, visual, cultural heritage, water and the natural environment are minimized on surrounding properties and will be at or below provincial standards.

Chapter 2 of the Regional Official Plan provides objectives and policy directives related to the natural environment. The set of environmental policies contained in the Official Plan seek to maintain, protect, restore and enhance natural systems in Peel, while recognizing the importance of a resilient natural environment which will better enable natural systems to recover from disturbances and to tolerate and adapt to changes. In this regard, the Regional Official Plan encourages mitigation and adaptation as core strategies for reducing and managing risks related to climate change. The following are noted in the Region's Official Plan related to the climate system in Peel:

- “2.4.4 To assess the potential impacts and associated risks of climate change to infrastructure and incorporate appropriate measures to reduce or mitigate vulnerabilities, impacts and risks.*
- 2.4.7 In collaboration with the local municipalities and conservation authorities, support and undertake climate change mitigation and adaptation planning and implementation through coordinated strategies, plans and actions in accordance with accepted frameworks and provincial guidance.”*

Aggregate can only be mined where it exists. Not all areas of the province have deposits of stone, sand and gravel. The Subject Site is located within the Greater Toronto Area (GTA) which has a high growth rate and, accordingly, a high demand for aggregates. Since more than half the of the cost of aggregate is the cost of transportation, it’s not desirable to move it long distances to where it will be used – primarily in the GTA and other parts of southern Ontario. Also, long distance travel contributes to greenhouse gas emissions, and added wear and tear on roads and highways in the province. The proposed CBM Caledon Pit / Quarry will provide a needed and available aggregate resource from a close to market location which will reduce economic, social and environmental impacts associated with aggregate hauling.

Section 2.5 in the Region’s Official Plan contains objectives and policy directives related to air quality in Peel. It is Peel’s objective to *“promote sustainable development and land use patterns which address public health, transportation systems, energy conservation and environmental concerns”* (Sec. 2.5.3). The following policies relate to air quality in Peel:

- “2.5.4 In consultation with the local municipalities, develop strategies and tools to assess the air quality implications of development that support the reduction in emissions from municipal, transportation, commercial, industrial and residential sources that can minimize adverse human health effects. These tools would be applied to but not limited to development applications and projects that may be insignificant by themselves, but cumulatively are significant.*
- 2.5.8 Proactively engage all orders of government, the private sector and public organizations to promote more health protective emissions standards for vehicles, industries and energy producing facilities.”*

An Air Quality Impact Assessment was completed in connection with the proposal. The Air Quality Impact Assessment characterizes the existing air quality in the surrounding area, estimates emissions from the future Site operations, predicts the impacts of the proposed Site operations on local air quality through dispersion modelling, and recommends best management practices to help mitigate the potential for fugitive dust generation. The report concludes that the maximum off-Site predicted cumulative air quality concentrations as a result of anticipated emissions from the

Site operations will be below the assessment criteria for all assessed contaminants, and provides recommended best management practices through the Site's Best Management Practices Plan (BMPP) to help control future fugitive dust to reduce and minimize off-Site effects.

The water resource system in Peel is comprised of many interrelated systems, features and areas including aquifers, ground water recharge and discharge areas, seepage areas and springs, rivers, streams, ponds, and wetlands. Ground water and surface water are both important regional resources and the following objectives and policies should be reviewed in connection with the proposed CBM Caledon Pit / Quarry:

- "2.6.1 To protect, improve or restore the quantity and quality of water resources for the supply of potable water and maintenance of ecosystem integrity.*
- 2.6.2 To eliminate or minimize potential negative land use impacts on vulnerable surface and ground water, sensitive ground water features and sensitive surface water features, and their hydrologic functions.*

A small portion of Main Area, a very small portion of the North Area and the majority of the South Area is mapped as a Highly Vulnerable Aquifer on the Region of Peel Schedule A-2 (**Figure 14**). This is very common for mineral aggregate resource areas, and based on the design of the operation, and the implementation of the recommendations contained the Water Resources Assessment, the proposed Caledon Pit / Quarry does not result in additional risk to the aquifer.

Almost all of the Rural Area in the Region of Peel including the Main Area, North Area and South Area are mapped as a Significant Groundwater Recharge Area on the Region of Peel Schedule A-3 (**Figure 15**). This is very common for mineral aggregate resource areas, and based on the design of the operation, and the implementation of the recommendations contained in the Water Resources Assessment, the groundwater recharge function of the area will be maintained.

- "2.6.11 Restrict development and site alteration to protect municipal drinking water supplies in accordance with the policies in this Plan, and to protect, improve or restore vulnerable surface and ground water, sensitive surface water features, sensitive ground water features, key hydrologic features and key hydrologic areas, and their functions.*

Approximately 100 surrounding water supply wells have been evaluated and of those, 15 wells have the potential to be impacted during operations due to their location relative to the predicted zone of influence of the Site, and their relatively shallow well construction in comparison to other wells in the area. It is noted in the Water Report Level 1/2 that if any of those wells were to be impacted by the operation, these wells would be deepened to the depth of other wells in the surrounding area to restore the water supply, at the licensee's responsibility / expense.

- 2.6.12 *Require that development and site alteration that may have an immediate or cumulative impact on water resources be supported by appropriate hydrological and hydrogeological studies in accordance with provincial policy and the policies of this Plan. Study requirements, as appropriate, shall be confirmed when applications for development or site alteration are proposed within designated vulnerable areas or key hydrologic areas, or on lands within 120 metres of a sensitive surface water feature, sensitive ground water feature or key hydrologic feature.*
- 2.6.14 *Prohibit development and site alteration in key hydrologic features or any associated vegetation protection zone outside of settlement areas in accordance with any policies of this Plan and applicable provincial plan.*
- 2.6.15 *Direct the local municipalities to require a hydrologic evaluation that identifies a vegetation protection zone for applications related to new development or site alteration within 120 meters of a key hydrologic feature outside of a settlement area, in accordance with any requirements of this Plan and the Growth Plan.”*

There are no key hydrologic features located within the proposed extraction area. There is a 0.1 ha key hydrologic feature (i.e., wetland) that will be impacted for the construction of the proposed berm and this feature is permitted to be removed in accordance with applicable policies. There are also key hydrologic features (i.e., wetland and tributary) in the northwest corner of the Main Area and these features will be protected. When the rehabilitation plan is considered, there are 4.8 ha of wetland to be created and 158.3 ha lake to be created resulting in 163.1 ha of new key hydrologic features.

On the Region of Peel Schedule A-1 (Water Resources, Systems and Features) (**Figure 13**), the proposed extraction area does not contain any identified features. The proposed licence area includes an identified feature in the northwest corner of the Main Area and this feature is located outside of the extraction area and will be protected. On Region of Peel Schedule A-2 (Highly Vulnerable Aquifers) (**Figure 14**) a small portion of Main Area, a very small portion of the North Area and the majority of the South Area is mapped as a Highly Vulnerable Aquifer. This is very common for mineral aggregate resource areas, and based on the design of the operation, and the implementation of the recommendations contained in this report, the operation does not result in a risk to the aquifer. On Region of Peel Schedule A-3 (Significant Groundwater Recharge Area) (**Figure 15**) almost all of the Rural Area in Peel including the Main Area, North Area and South Area are mapped as a Significant Groundwater Recharge Area. This is very common for mineral aggregate resource areas, and based on the design of the operation, and the implementation of the recommendations contained in this report, the Groundwater Recharge function of the area will be maintained.

It is noted in the Water Report Level 1/2 that the proposed Caledon Pit / Quarry is within the Credit Valley Source Protection Area but is not located in a wellhead protection area (WHPA) or an intake protection zone (IPZ) and there will be no impacts to municipal water supplies. The Water Report notes that the closest municipal drinking water systems are the Alton Well Supply to the north and the Caledon Village-Alton Well Supply to the north and east-northeast. The Alton municipal wells are located approximately 3.4 km north-northwest of the Site, and the Caledon Village-Alton wells are located approximately 2.3 km north of the Site and 3.8 km east-northeast of the Site. The closest WHPA is approximately 1.9 km east-northeast of the Site and part of the Caledon Village-Alton WHPA. Since the Site is not located in any WHPAs, there are no significant threats to the municipal water supplies.

Section 2.7 in the Region’s Official Plan contains objectives and policy directives related to source water protection, to ensure that the quality and quantity of drinking water supplies are protected.

- “2.7.8 *Direct the local municipalities to require the appropriate studies in accordance with the applicable source protection plan to assess whether development and site alteration will be a potential threat to a municipal drinking water source within a vulnerable area and determine whether development or site alteration should be restricted, prohibited or regulated.*
- 2.7.10 *Identify wellhead protection areas and issue contributing areas on Schedule A-5.*
- 2.7.11 *Identify the relative vulnerability of wellhead protection areas shown on Schedule A-5 by indicating their vulnerability to drinking water threats as a vulnerability score which ranges from 1 to 10, with 10 representing the highest vulnerability.”*

The Site is not located within a wellhead protection area (WHPA) or an intake protection zone (IPZ) and it is confirmed in the Water Report that there are no significant threats to the municipal water supplies.

Section 2.12 of the Regional Official Plan contains objectives and policy directions related the Greenbelt Plan. As already noted, the Subject Site is located within the ‘Protected Countryside’ land use designation within the Greenbelt Plan, and the northern and eastern portions of the subject Site are within the “Natural Heritage System” overlay within the Greenbelt Plan (**Figure 12**). As noted earlier in this Report, the Greenbelt Plan complements and supports other provincial level initiatives and seeks to improve ecological linkages between these areas and the surrounding major lake systems and watersheds. The Region’s Official Plan must conform to the Greenbelt Plan and accordingly, it contains similar policy directives to ensure the protection of the ecological features and their functions within the Greenbelt Plan area. Importantly, the Greenbelt Plan allows

municipalities to be more restrictive except with respect to agricultural uses, mineral aggregate operations, and wayside pits and quarries.

Further, the following is noted in the Region's Official Plan related to the Region's approach and background as it relates to mineral aggregate resource management and developing policy directives:

“2.13 Where a municipality has undertaken a comprehensive aggregate resource management study and has implemented the results into its official plan, prior to December 16, 2004, such policies shall be deemed to conform to the Greenbelt Plan. A comprehensive aggregate resource management study has been completed by the Region and the Town of Caledon, and the recommended policy approaches have been incorporated into the Town of Caledon Official Plan.”

The Site is located within the Region's High Potential Mineral Aggregate Resource Area (HPMARA), as show on **Figure 5**. Further, the Region's Official Plan contains specific policy directives related to mineral aggregate resources which have been reviewed in detail in this Report.

As shown on **Figure 7: Excerpt from Region of Peel Official Plan Schedule D-1: Rural System**, the portion of the Subject Site located on the west side of Main Street / RR 136 (and west of Cataract Road) is located within mapped 'Prime Agricultural Area' pursuant to the Region's Official Plan. Section 2.12.12 of the Region's Official Plan contains policy directives for geographic-specific areas within the 'Protected Countryside', including 'Prime Agricultural Areas', as follows:

“2.12.12.1.3 Direct the Town of Caledon to include policies in its official plan that permit non-agricultural uses subject to the general policies of 2.12.16.9 to 2.12.16.24 in this Plan and in accordance with the Greenbelt Plan. Non-agricultural uses are generally discouraged in the Prime Agricultural Area and may only be permitted subject to the satisfactory completion of an agricultural impact assessment.”

As discussed earlier in this Report in the context of the Greenbelt Plan, and as referenced later in this Report, Section 2.12.16.19 of the Regional Official Plan permits mineral aggregate operations within the 'Protected Countryside' of the Greenbelt pursuant to the Greenbelt Plan.

For the portion of the Subject Site located east of Main Street / RR 136, north of Charleston Sdrd., located in the 'Rural Land' and within the 'Protected Countryside' of the Greenbelt Plan, the Region's Official Plan contains policies to recognize the importance of these lands for a range of recreational, tourism, institutional and resource-based commercial and industrial uses. Relevant policies include the following:

- “5.7.19.7 *Permit the following uses in Rural Lands without the requirement for an amendment to the Region of Peel Official Plan, subject to the other policies of this Plan and the applicable local official plan:*
- g) other rural uses that are compatible with the rural landscape and surrounding uses, can be sustained by rural service levels and will not adversely affect adjacent agricultural operations and other resource-based uses such as mineral aggregate operations.*
- 2.12.12.2.2 *Direct the City of Brampton and the Town of Caledon to allow and support within the Rural Lands of the Protected Countryside an appropriate range of recreational, tourism, institutional and resource-based commercial and industrial uses, normal farm practices and a full range of existing and new agricultural uses, agriculture-related uses and on-farm diversified uses. Proposed agriculture-related uses and on-farm diversified uses should be compatible with and not hinder surrounding agricultural operations in accordance with provincial guidelines.*
- 2.12.12.2.4 *Direct the City of Brampton and the Town of Caledon to permit non-agricultural uses in Rural Lands subject to Section 2.12.16 of this Plan and in accordance with the Greenbelt Plan. With the exception of mineral aggregate operations, the requirement of an agricultural impact assessment should be considered.*
- 2.12.12.2.7 *Direct the City of Brampton and the Town of Caledon to include policies in their official plans to promote land use compatibility where agricultural uses and non-agricultural uses interface, by avoiding, or where avoidance is not possible, minimizing and mitigating adverse impacts. Where mitigation is required, measures should be incorporated into the nonagricultural use, as appropriate, in accordance with provincial guidelines.*
- 2.12.12.2.8 *Non-agricultural uses may be permitted within Rural Lands in accordance with the General Policies for the Protected Countryside Section of this Plan.”*

Mineral aggregate operations are permitted on Rural Lands in the Region of Peel Official Plan. An AIA was completed for the entire Subject Site, including the portion of the Site in Rural Lands (i.e. not prime agricultural area). Specifically, the AIA confirms that approximately 45% of the Subject Site contains prime agricultural lands (consisting of CLI Class 2) and the balance,

consisting of approximately 55% of the Subject Site, consists of non-prime agricultural lands (i.e. CLI Classes 4 and 5).

It is confirmed in the AIA that with the implementation of the recommended mitigation measures, the proposed CBM Caledon Pit / Quarry operation will have minimal effect on the surrounding agricultural land uses. Licencing of the proposed CBM Caledon Pit / Quarry will be consistent with the agricultural-related policies provided in provincial, regional and local planning documents regarding mineral extraction in prime agricultural areas.

For the northern and eastern portions of the Subject Site within the ‘Protected Countryside’ which have ‘Natural Heritage System’ overlay on them (**Figure 12**), the following policy directives apply:

“2.12.13.1.4 Direct the Town of Caledon and the City of Brampton to include policies in their official plans for development and site alteration in the Natural Heritage System, as permitted by the Greenbelt Plan, to demonstrate that:

a) there are no negative impacts on key natural heritage features or key hydrologic features or their functions;

b) connectivity along the system and between key natural heritage features and key hydrologic features located within 240 metres of each other is maintained or where possible, enhanced for the movement of native plants and animals across the landscape;

c) the removal of other natural features not identified as key natural heritage features and key hydrologic features should be avoided;..”

As shown on **Figure 12**, the northern and eastern limits of the Subject Site are within the Natural Heritage System overlay of the Greenbelt Plan. These locations are immediately abutting woodland B and woodland D, which are both identified in the Natural Environment Report as off-Site significant woodlands, recognized to be within the Greenbelt Plan NHS. However, it is confirmed in the Natural Environment Report that these features are not present within the limits of the Subject Site. It is further confirmed that extraction may occur adjacent to significant woodlands where an appropriate Vegetative Protection Zone (VPZ) is implemented, and it is noted that extraction will be set back a minimum of 15 m from woodlands B and D and a VPZ of 10 m will be implemented. Further, it is confirmed in the Natural Environment Report that the only KNHF identified on the Site, within the extraction limit, is SAR Habitat; however, this is outside of the Natural Heritage System limits.

Section 2.12.13.2.6 contains policy directives related to key hydrologic areas in the ‘Protected Countryside’, as follows:

“2.12.13.2.6 Direct the City of Brampton and the Town of Caledon to include policies in their official plans to only permit major development within a key hydrologic area in the Protected Countryside where it has been demonstrated that the hydrologic functions are protected and, where possible, improved or restored in accordance with the Greenbelt Plan...”

It is also confirmed in the Natural Environment Report that the Credit River and the Coulterville Wetland Complex are considered key hydrologic features; however they are located off-site. There are no key hydrologic features located within the extraction area on Site.

The Region’s Official Plan contains policy directives related to key natural heritage features (KNHFs) and key hydrologic features within the ‘Protected Countryside’ which are similar to those found in the Greenbelt Plan. As discussed above in the Greenbelt Plan section of this Report, aggregate operations may be a permitted use within a KHNF or a KHF within the Protected Countryside. As noted in the Natural Environment Report, the following KNHF were identified on the Site, within the extraction limit, but outside of the Natural Heritage System limits:

- SAR habitat (little brown myotis, eastern small-footed myotis, bobolink, eastern meadowlark)

As well, the following KNHF and KHF were identified on the Site, outside of the extraction limit:

- Fish habitat (Tributary #1)
- Wetlands (unevaluated wetland Units #1, 3, 4)

Within the Greenbelt Plan NHS and within the Regional Official Plan, mineral aggregate operations are prohibited within habitat of endangered or threatened species within the Greenbelt NHS. As confirmed in the Natural Environment Report, all SAR habitat identified within the extraction limit is located within the Greenbelt Protected Countryside and outside of the Greenbelt Plan NHS. The PPS permits development within habitat of endangered or threatened species in accordance with provincial or federal requirements.

As noted above, unevaluated wetland Unit #1 was identified on the Site, outside of the extraction limit. Mineral aggregate extraction and site disturbance may be permitted within non-significant wetlands where it is demonstrated the feature can be replaced. No extraction is proposed within the wetland Unit #1; however, this wetland Unit is proposed to be removed to construct a berm and it is confirmed that no significant ecological functions or linkages to other significant natural features were identified on this wetland. Further, this wetland unit will be replaced with a greater amount of wetland habitat through the progressive rehabilitation and ecological enhancements proposed for the Site.

As well, as noted above, Tributary #1 (with fish habitat) and unevaluated wetland (Unit #3 and #4) were identified on the Site, outside of the extraction limit. Extraction will be set back a minimum of 30 m from Tributary #1 and from wetland Units #3 and 4, plus a 10 m VPZ will be implemented from each of these features.

“2.12.13.2.8 Key natural heritage features outside of the Natural Heritage System within the Protected Countryside of the Greenbelt Plan shall be defined in accordance with the Greenlands System policies of this Plan.”

As noted, KNHFs on Site but outside of the Greenbelt Natural Heritage System include SAR (Bat Habitat) and unevaluated wetland Unit #1. The SAR has been noted to not be significant habitat and will be removed and replaced through compensation on Site outside of the proposed extraction area and through ecological enhancements to occur through rehabilitation. Wetland Unit #1 is proposed to be removed to construct berm; however, it is confirmed that this feature will also be replaced through compensation on Site outside of the proposed extraction area and through ecological enhancements to occur through rehabilitation.

Region of Peel Official Plan policies related to non-agricultural uses within the ‘Protected Countryside’ include the following:

“2.12.16 Non-Agricultural Uses

The Rural Lands of the Protected Countryside are intended to continue to accommodate commercial, industrial and institutional uses serving the rural resource and agricultural sectors, and support a range of recreation and tourism uses such as trails, parks, golf courses, bed and breakfasts and other tourism based accommodation, serviced playing fields and campgrounds, ski hills and resorts.”

“2.12.16.1 Direct the Town of Caledon to prohibit non-agricultural uses within the Prime Agricultural Area of the Protected Countryside, with the exception of those uses permitted by the general policies of the Greenbelt Plan, and subject to the Natural Heritage System policies of this Plan.

2.12.16.2 *Direct the Town of Caledon and the City of Brampton to require that proponents for proposals for non-agricultural uses in the Rural Lands of the Protected Countryside demonstrate that:*

a) the use is appropriate for location on Rural Lands;

b) the type of water and sewage servicing proposed is appropriate for the type of use;

c) there are no negative impacts on key natural heritage features and/or key hydrologic features or their functions; and

d) there are no negative impacts on the biodiversity or connectivity of the Natural Heritage System.”

2.12.16.3 *Direct the City of Brampton and the Town of Caledon to require the consideration of an agricultural impact assessment completed to the satisfaction of the municipality, for proposed non-agricultural uses on Rural Lands in the Protected Countryside, except for mineral aggregate operations.*

As noted already, the AIA was completed for the entire Subject Site and confirms that with the implementation of the recommended mitigation measures, the proposed CBM Caledon Pit / Quarry operation will have minimal effect on the surrounding agricultural land uses. Licencing of the proposed CBM Caledon Pit / Quarry will be consistent with the agricultural-related policies provided in provincial, regional and local planning documents regarding mineral extraction in prime agricultural areas.

“2.12.16.19 Direct the City of Brampton and Town of Caledon to include policies in their official plans to permit mineral aggregate operations or wayside pits within the Protected Countryside of the Greenbelt; in accordance with Section 4.3.2 of the Greenbelt Plan, and the applicable policies of this Plan and the City of Brampton and Town of Caledon official plans.”

Consistent with what was discussed earlier in this Report in the context of the Greenbelt Plan, the Regional Official Plan permits mineral aggregate operations within the ‘Protected Countryside’ of the Greenbelt pursuant to the Greenbelt Plan.

The following policies relate to rehabilitation for mineral aggregate operations within the ‘Protected Countryside’:

- 2.12.16.20 *Direct the City of Brampton and Town of Caledon to include policies in their official plans to require that operators undertaking rehabilitation of mineral aggregate operations sites in the Protected Countryside do so in accordance with Section 4.3.2.6 of the Greenbelt Plan.*
- 2.12.16.21 *Require that final rehabilitation in the Natural Heritage System will meet the following provisions:*
- b) *where there is extraction below the water table, no less than 35 per cent of the non-aquatic portion of the land subject to each license in the Natural Heritage System is to be rehabilitated to forest cover, which shall be representative of the natural ecosystem in that particular setting or ecodistrict. If the site is also in a Prime Agricultural Area, the remainder of the land subject to the license is to be rehabilitated in accordance with Section 2.5.4 of the Provincial Policy Statement; and*
 - c) *rehabilitation will be implemented so that the connectivity of the key natural heritage features and the key hydrologic features on the site and on adjacent lands shall be maintained or enhanced.*
- 2.12.16.22 *Encourage operators, where appropriate, to consider and provide for public access to former aggregate sites upon final rehabilitation.”*

In accordance with the requirements of the ARA Provincial Standards, PPS., Greenbelt Plan and Region of Peel Official Plan, the extracted area will be progressively rehabilitated, as outlined on the Site Plans (**Figure 9: Rehabilitated Landform and Ecological Enhancement Areas**).

The post-extraction rehabilitation plan has been designed to fit into the overall regional context and complement the existing topography and terrestrial and aquatic features in the area. Because the extraction is below-water, rehabilitation to agricultural is not feasible and the overall final rehabilitation plan will consist of three separate lakes in each of the North, Main and South extraction areas surrounded by nearshore, riparian, and upland habitats. Proposed rehabilitation of the extraction area will proceed progressively through each phase.

A total of 67.7 ha of woodland will be planted on Site through rehabilitation (52.2 ha) and off-Site (15.5 ha) to replace forest lost through the proposed extraction and to create connections between the rehabilitated habitat and those off-Site. The forest will be planted in two main blocks located in the main extraction area and to the south of the south extraction area. The forest block in the main extraction area will include species representative of the woodland communities that will be

removed as well as the adjacent existing woodland, to expand the quality and quantity of upland habitat currently available. The meadow and forest blocks in the southern parcel will also create a linkage with the Cataract Southwest PSW to the south, provide additional upland habitat to support wildlife using the PSW, and also enhance erosion controls on the slope adjacent to the PSW.

A total of 27.9 ha of meadow habitat will be created in the north extraction area and to the south of the south extraction area. The meadow areas will be planted primarily with grass species, as well as forbs or legumes. These meadow areas will provide habitat for eastern meadowlark and bobolink.

The overall goal of the final rehabilitation plan is to create a landform that represents an ecological and visual enhancement and provides future opportunities for conservation, recreational, tourism and water management. Overall, the progressive and final rehabilitation plan for the Subject Site includes the creation of 158.3 hectares of lakes, 7.9 hectares of gradual grades and islands, 4.8 hectares of wetlands, 52.2 hectares of woodlands, 15.8 ha of grasslands, 7.6 ha of meadow, and 15.8 hectares to remain in existing conditions. The proposed rehabilitation has been designed to use all of the on-Site topsoil and overburden and does not require the importation of additional soils.

Section 2.14 of the Region's Official Plan provides policies related to the Greenlands System in the Region of Peel. The Region's Greenlands System consists of Core Areas, Natural Areas and Corridors (NAC), and Potential Natural Areas and Corridors (PNAC). Core Areas include provincially and regionally significant features and areas that are deemed to be important to the Region and warrant a high standard of protection. NAC and PNAC natural features and areas may also be evaluated and identified to be significant in local municipal official plans.

“2.14.5 Define the Greenlands System as being made up of the following components:

a) Core Areas, which are designated and shown generally on Schedule C-2, which are protected, restored and enhanced in this Plan and in the local municipal official plans;

b) Natural Areas and Corridors, which will be interpreted, protected, restored, and enhanced and shown, as appropriate, in the local municipal official plans;

c) Potential Natural Areas and Corridors, which will be interpreted, protected, restored, and enhanced and shown, as appropriate, in the local municipal official plans. Potential Natural Areas and Corridors will be analyzed to determine their functional role in supporting and enhancing the ecological integrity of the Greenlands System;

e) The Natural Heritage System overlay of the Greenbelt Plan and the key natural heritage features and key hydrologic features, which will be protected in accordance with the Plan;”

As confirmed in the Natural Environment Report, and as shown on **Figure 16: Excerpt from Region of Peel Official Plan (Schedule C-2 Core Areas of the Greenlands)**, there are no Core Areas mapped on the Site. Off-Site, there are three features mapped as Core Areas: the large woodland north of the Site, the woodland east of the Site, and the Cataract Southwest Provincially Significant Wetland (PSW) located to the south and southeast of the Site, off-site.

As noted in the Natural Environment Report, there are Natural Areas and Corridors (NAC) and Potential Natural Areas and Corridors (PNAC) on the Site, including woodlands A, C, G and F, unevaluated non-significant wetlands (Unit #1, 3, 4 and 5), fish habitat (Tributary #1), and other valley and stream corridors.

Figure 12: Excerpt from Region of Peel Official Plan (Schedule C1: Greenlands System) and **Figure 13: Excerpt from Region of Peel Official Plan (Figure 7: Regional Greenlands System)** illustrate the pockets of Greenlands System, including NAC and PNAC, on the Site. The following policies are relevant for the Greenlands System and, more particularly for the features considered NAC and PNAC within the Subject Site, pursuant to the Peel Official Plan:

- “2.14.8 *Maintain, restore and improve the diversity and connectivity of natural heritage features and areas within the Greenlands System’s components and the long-term ecological function and biodiversity of the Greenlands System, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.”*
- 2.14.21 *Recognize the environmental value of all wetlands as part of the Greenlands System and Water Resource System and support their identification and protection through the planning approval process, as appropriate.*

The proposed CBM Caledon Pit/Quarry will succeed in maintaining, restoring and improving the diversity and connectivity of natural heritage features and their functions within the Site and on surrounding lands. As noted in the Natural Environment Report, there are no significant wetlands on Site and there are five (5) unevaluated wetlands on Site. Wetland Unit #1 and #5 did not meet the size criterion to be assessed and no significance ecological functions were identified that would warrant them for assessment. Unit #1 is proposed to be removed for the construction of a berm; however it will be replaced with equal to or more habitat replacement through rehabilitation within the Site. Wetland Unit #2 was determined not be a wetland and was therefore not assessed. Wetland Units #3 and 4 were the only units that met the size criterion to be considered for

assessment. It was confirmed that they have a hydrological connection and are eligible for complexing with the adjacent unevaluated non-significant Coulterville Wetland Complex. Accordingly, the Natural Environment Report has recommended these wetland units be complexed with the Coulterville Wetland Complex, and a 30 m extraction setback and a 10 m VPZ will be implemented from these wetland units (Unit #3, 4) as well as from Unit #5.

2.14.24 Recognize the environmental value of all valley and stream corridors as part of the Greenlands System and support their identification and protection through the planning approval process, as appropriate.

As confirmed in the Natural Environment Report, there are no significant valleylands on Site. Off-Site, the Credit River valleyland just south of the Site is a significant valleyland. As well, the small valleyland associated with Tributary #1 on the Site is considered a supporting valleyland. It is confirmed in the Natural Environment Report that with the implementation of best management practices and mitigation measures and enhancements during progressive rehabilitation, no negative impacts on significant valleylands or supporting valleylands are expected as a result of the proposed extraction.

2.14.30 Direct the local municipalities to include or develop criteria and thresholds for woodlands identified as Natural Areas and Corridors and Potential Natural Areas and Corridors in accordance with Policy 2.14.20 and the criteria in Table 1 and to consider criteria and thresholds based on environmental, physiographic, social and economic factors.”

As already noted, woodlands C, F and G are located on Site, within the proposed extraction area. These woodlands are considered a Natural Area and Corridor (NAC) or a Potential Natural Area and Corridor (PNAC) pursuant to the Region’s Official Plan. As well, woodland A which is located on Site, but outside of the proposed extraction area, is considered to be a NAC pursuant to the Region’s Official Plan. Analysis and rationale for the removal of woodlands C, F and G are provided in the Natural Environment Report and includes confirmation that with the implementation of best management practices and mitigation measures, and the creation of a net gain in woodland area during progressive rehabilitation, no net negative impacts on woodlands on or off-Site are expected as a result of the proposed extraction.

2.14.35 Prohibit development and site alteration in fish habitat except in accordance with federal and provincial requirements.

Tributary #1 has fish habitat and it is confirmed that extraction will be set back a minimum of 30 m from Tributary # 1 and further, a 10 m VPZ will be implemented. As well, on-going monitoring will be conducted at Tributary #1 and the associated pond to establish the natural background conditions and to monitor levels to ensure they are maintained. It is noted in the Natural Environment Report that that with the implementation of best management practices and mitigation measures, and enhancements, no net negative impacts on Tributary # 1 and the associated fish habitat is expected as a result of the proposed extraction.

2.14.36 *Prohibit development and site alteration in habitat of endangered and threatened species and in the habitat of aquatic species at risk except in accordance with provincial and federal requirements.”*

As already noted, SAR habitat (little brown myotis, eastern small-footed myotis, bobolink, eastern meadowlark) has been noted on Site and within the proposed extraction area. The Natural Environment Report confirms that although SAR habitat was identified on the Site for bats (woodlands F and G) and bobolink and eastern meadowlark (pastures northeast of Charleston Sdrd and Mississauga Road), these are not considered significant habitat of endangered or threatened species because woodlands F and G were assessed to be part of a roost network, but not a primary roosting area and, specifically, are not relied on as a critical resource for survival and reproduction. Further, the field supporting bobolink and eastern meadowlark are agricultural fields that are actively used for livestock and may also be planted in crop during some years. Accordingly, the fields are considered agricultural and do not represent a permanent or significant habitat for these grassland birds. Furthermore, in accordance with the ESA, compensation for the loss of bat maternity roost habitat will be provided through rehabilitation, and meadow habitat will be provided for the loss of Bobolink and Eastern Meadowlark habitat, through rehabilitation.

2.14.39 *Apply a systems approach to implementing the Greenlands System by*

c) Directing the local municipalities to include policies in their official plans not permitting development or site alteration within or on adjacent lands to natural heritage features and areas identified as Greenlands System Natural Areas and Corridors and Potential Natural Areas and Corridors or on adjacent lands to the natural heritage features and areas identified as Core Areas of the Greenlands System, unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

e) Directing the local municipalities to require proponents of development or site alteration within or on adjacent lands to natural heritage features and areas identified as Greenlands System Core Areas, Natural Areas and Corridors and Potential Natural Areas and Corridors to prepare an environmental impact study the purpose of which is to:

i) inventory components and refine the boundaries of the Greenlands System features and areas;

ii) establish limits of development and site alteration in relation to the Greenlands System's natural heritage features and areas requiring protection;

iii) assess the potential environmental impacts of the development and site alteration;

iv) make recommendations to avoid, minimize, and mitigate impacts including identifying enhancement areas and requirements for buffers and vegetation enhancement adjacent to features; and

v) identify requirements to restore or establish linkages between and among natural heritage features and areas, surface water features and ground water features, where ecologically appropriate.

As noted in the Region's policy directives, development or site alteration (including mineral aggregate extraction) may be permitted within, and adjacent to, NAC and PNAC where it is demonstrated there will be no net negative impact on the feature and there will be an overall ecological benefit through restoration and enhancement. All features and their functions on and off Site have been evaluated through the Natural Environment Report and confirmation has been provided that certain features are not significant, can be removed and compensated for through rehabilitation, and there will be no negative impacts to features or their functions resulting from the proposal. As well, through the Natural Environment Report, all features identified have been evaluated and assessed and it is noted that with the implementation of best management practices and mitigation measures, and enhancements, respective to each feature or their function, no net negative impacts are anticipated as a result of the proposed extraction.

“2.14.42 Work jointly with agencies and landowners to rehabilitate abandoned mineral aggregate extraction areas and progressively rehabilitate operating pits and quarries and peat extraction areas to the highest level of ecological integrity practicable within the context of the local municipal official plans and in accordance with relevant legislation.”

The proposed CBM Caledon Pit / Quarry is planned to be progressively rehabilitated which involves the management of the property's natural environment during and after the extraction process. The post-extraction rehabilitation plan has been designed to fit into the overall regional context and complement the existing topography and terrestrial and aquatic features in the area. Because the extraction is below-water, it is not feasible to rehabilitate the lands back to agricultural conditions. Rather, the overall final rehabilitation plan will consist of three separate lakes in each of the North, Main and South extraction areas surrounded by nearshore, riparian, and upland habitats. Proposed rehabilitation of the extraction area will proceed progressively through each phase.

Chapter 3 in the Region's Official Plan contains policies related to renewable and non-renewable resources in Peel. It is noted in the Official Plan that there must be a balance between the use and protection of resources, and the preservation of Peel's natural and cultural environment, while allowing for growth. It is recognized that non-renewable resources will continue to be consumed for urban and economic growth purposes and will require sound management to allow for their use and protect their availability.

As noted earlier, the Subject Site is partially designated “Prime Agricultural Area” (**Figure 7**). Policies for the Region's Prime Agricultural Area include the following:

“3.3.14 Permit non-agricultural uses in the Prime Agricultural Area without the requirement for an amendment to the Region of Peel Official Plan and subject to a local official plan amendment only for:

a) extraction of minerals, petroleum resources and mineral aggregate resources, in accordance with Section 3.4;

3.3.15 Require that, where a new or expanding non-agricultural use is proposed in the Prime Agricultural Area:

a) an agricultural impact assessment be prepared in accordance with provincial and municipal guidelines; and

b) adverse impacts on agricultural operations shall be avoided or, if avoidance is not possible, shall be minimized and mitigated. Where mitigation is required, the mitigation measures should be incorporated as part of the non-agricultural uses, as appropriate, within the area being developed.

“3.3.19 In Prime Agricultural Area, applications for new mineral aggregate operations will be supported by an agricultural impact assessment and, where possible, will seek to maintain or improve connectivity of the Agricultural System.”

As already noted, the proposed CBM Caledon Pit / Quarry is located in a prime agricultural area and pursuant to Provincial policy, an AIA was completed. The Agricultural Impact Assessment completed for the CBM Caledon Pit / Quarry concludes that with the implementation of the recommended mitigation measures, the proposed CBM Caledon Pit / Quarry operation will have minimal effect on the surrounding agricultural land uses. Licencing of the proposed CBM Caledon Pit / Quarry will be consistent with the agricultural-related policies provided in provincial, regional and local planning documents regarding mineral extraction in prime agricultural areas.

The Region’s Official Plan recognizes that mineral aggregate resources have economic benefits when they are located in Peel such as reducing the transportation costs of supplying materials for urban development in the Region and attracting value-adding processing facilities that use aggregates and shale as raw materials. It is noted that mineral aggregate resources are an important component of the economic development and employment opportunities in the Region and therefore appropriate resource areas should be protected for possible use. The Region’s role in mineral aggregate resource planning includes identifying the appropriate resource areas for protection, establishing Regional policies to protect these resource areas for possible use and including policies to allow the resource to be made available, and ensuring the Regional interests are incorporated into any planning decisions. Section 3.4 contains objectives and policies specific to mineral aggregate resources, as follows:

“Objectives

3.4.1 To identify high potential mineral aggregate resource areas, to protect them for possible use and to establish policies that allow as much of the resource as is realistically possible to be made available for use to supply resource needs, in a manner consistent with this Plan, the Niagara Escarpment Plan, where applicable, and the local municipal official plan.

- 3.4.2 *To recognize the Region's mineral aggregate resource industry as an important component of the Region's economic base.*
- 3.4.3 *To achieve a balance between the demand for, and economic benefits of resource extraction activity and the protection of Peel's communities, natural environment, cultural heritage and other resources.*
- 3.4.4 *To support initiatives for the rehabilitation of abandoned pits and quarries and to require the progressive rehabilitation of operating pits and quarries.*

Ontario's aggregate industry contributes to the provincial economy directly through its product and the employment it generates, and indirectly through the provision of aggregate products which support Ontario's construction industry, which also employs thousands of people. As well, in addition to business taxes paid by aggregate producers, producers also contribute licence fees to provincial and municipal coffers. Lastly, aggregate companies, including CBM, are typically very invested in the communities in which they operate, by donating resources, staff time and funding important community projects and charitable causes.

The aggregate industry is among the most highly regulated in Ontario, to ensure the protection of people and the natural environment. In support of the proposed CBM Caledon Pit / Quarry, technical reports addressing key natural heritage features, cultural heritage resources, visual, water resources, agricultural, noise, air quality, blasting, and traffic have been completed. The design of the CBM Caledon Pit / Quarry will protect and enhance key natural heritage features and key hydrologic features and water resources, will conserve cultural heritage resources, will screen the active extraction area to maintain the open landscape character of the area, and will minimize and mitigate impacts on surrounding agricultural lands and operations. As well, the proposal will enhance the natural environment through the off-Site ecological enhancement plan and the progressive and final rehabilitation plan by creating a landform that is suitable for conservation, recreation, and water management and which is compatible with surrounding land uses.

"Policies

- 3.4.5 *Protect the High Potential Mineral Aggregate Resource Areas (HPMARA), as generally identified on Schedule D-2 for possible use. These areas shall be reflected in local municipal official plan, and may be refined in those plans, having regard for local environmental, cultural, social and other planning considerations. An amendment to Schedule D-2 to reflect local refinements shall not be required, as long as the local refinements respect the intent of this Plan.*

3.4.6 *Permit mineral aggregate extraction sites, inside or outside of the area identified as High Potential Mineral Aggregate Resource Areas (HPMARA), only where extraction is permitted in a local municipal official plan and only in conformity with this Plan, the Niagara Escarpment Plan, the Oak Ridges Moraine Conservation Plan, the Greenbelt Plan and the Provincial Policy Statement where applicable. An amendment to Schedule D-2 will not be required for the establishment or expansion of a mineral aggregate extraction site.”*

Figure 5: Excerpt of Region of Peel Official Plan (Schedule D-2: HPMARA) illustrates that the Subject Site is mapped HPMARA in the Region’s Official Plan. While it is acknowledged that the HPMARA shown on Schedule D-2 is not a land use designation, it is noted in the Region’s Official Plan that an amendment to the Region’s Official Plan will not be required to permit extraction and further, an amendment will not be required to refine areas to be protected or to permit extraction. HPMARA includes the primary and secondary sand and gravel resource areas and bedrock resources located in the Region that are not constrained by the Core Areas of the Greenlands, registered plans of subdivision or settlement areas.

“3.4.7 Prohibit new or expanded mineral aggregate extraction sites and wayside pits and quarries or any ancillary or accessory uses thereto, in the following areas:

- a) the Core Areas of the Greenlands System;*
- b) the Escarpment Protection Area of the Niagara Escarpment Plan;*
- c) the Natural Core Areas as designated within the Oak Ridges Moraine Conservation Plan Area;*
- d) Key natural heritage features and hydrologically sensitive features and the associated minimum vegetation protection zone, as defined by the Oak Ridges Moraine Conservation Plan, within the Oak Ridges Moraine Conservation Plan Area, except as permitted by the Oak Ridges Moraine Conservation Plan; and*
- e) Significant woodlands within the Greenbelt Natural Heritage System unless the woodland is occupied by early successional habitat or young plantation. The prohibition within significant woodlands within the Greenbelt Natural Heritage System applies only to new mineral aggregate extraction sites and wayside pits and quarries and their ancillary or accessory uses.*

It should be noted the Subject Site is not located within the Niagara Escarpment Plan area or the Oak Ridges Moraine Conservation Plan Area. As noted in the Natural Environment Report, there are no Core Areas of the Greenlands or significant woodlands on Site, including within any area of NHS within the Greenbelt Plan on Site. Accordingly, the proposal conforms to the above noted policy.

“3.4.10 Require that all extraction and processing and ancillary or accessory use thereto, be located, designed and operated so as to minimize environmental, community and social impacts.

3.4.11 Conduct such studies and address, as it considers appropriate, jointly with the local municipalities, the cumulative effects of the establishment and expansion of mineral aggregate extraction sites on Peel's communities, natural environment and cultural features.

In support of the proposed CBM Caledon Pit / Quarry, technical reports addressing key natural heritage features, cultural heritage resources, visual, water resources, agricultural, noise, air quality, blasting, and traffic have been completed. The design of the CBM Caledon Pit / Quarry ensures that any environmental, community or social impacts are minimized. Specifically, the design will protect and enhance key natural heritage features and key hydrologic features and water resources, will conserve cultural heritage resources, will utilize existing haul routes, will screen the active extraction area to maintain the open landscape character of the area, will minimize and mitigate impacts on surrounding agricultural lands and operations, and will enhance the natural environment through the off-Site ecological enhancement plan and the progressive and final rehabilitation plan by creating a landform that is suitable for conservation, recreation, and water management and is compatible with surrounding land uses. As well, the design will ensure that potential impacts on surrounding lands from a noise, visual or blasting perspective are minimized and within all provincial standards.

Rehabilitation is an important consideration and component to any new mineral aggregate resource operation. The following policies apply:

3.4.12 Promote progressive rehabilitation of licensed mineral aggregate extraction sites in a manner that conforms with the applicable policies in this Plan, the local municipal official plan, the Niagara Escarpment Plan, the Oak Ridges Moraine Conservation Plan, Greenbelt Plan, Provincial Policy Statement, and the Aggregate Resources Act.

The proposed CBM Caledon Pit / Quarry is planned to be progressively rehabilitated. The Final Rehabilitated Landform and Ecological Enhancement Areas (**Figure 9**) has been designed to fit into the overall regional context and complement the existing topography and terrestrial and aquatic features in the area. Because the extraction is below-water, it is not feasible to rehabilitate the lands back to agricultural conditions. Rather, the overall final rehabilitation plan will consist of three separate lakes in each of the North, Main and South extraction areas surrounded by nearshore, riparian, and upland habitats. Proposed rehabilitation of the extraction area will proceed progressively through each phase.

The Regional Official Plan prescribes policy directives that should be contained within the local Official Plan, as follows:

- 3.4.14 *Direct the local municipalities to include in their official plans comprehensive mineral aggregate resource policies, including:*
- a) policies regarding the refinement of the areas identified for protection in this Plan and policies for the protection of the refined areas for possible use;*
 - b) policies regarding the establishment, prohibition, location, operation, expansion and rehabilitation of pits and quarries and associated activities;*
 - c) policies with criteria to establish a clear and reasonable mechanism to permit official plan amendments to designate new or expanded mineral resource extraction sites to make the resource available for use;*
 - d) policies requiring applicants for designations for the establishment or expansion of aggregate extraction sites to undertake appropriate studies, including where applicable, the studies necessary to address the requirements contained in this Plan having regard to provincial standards and guidelines;*
 - g) policies to address aggregate uses in the Prime Agricultural Area in accordance with provincial policy;”*

The Town of Caledon Official Plan contains these policy directives and this is discussed in detail in the next section of this Report.

The Region encourages and supports conservation of cultural heritage resources. Section 3.6 contains objectives and policy directives related to cultural heritage resources, as follows:

- “3.6.1 To identify, conserve and promote Peel’s non-renewable cultural heritage resources, including but not limited to built heritage resources, cultural heritage landscapes and archaeological resources for the well-being of present and future generations.*
- 3.6.10 Require local municipal official plans to include policies where the proponents of development proposals affecting cultural heritage resources provide sufficient documentation to meet provincial requirements and address the Region’s objectives with respect to cultural heritage resources.*
- 3.6.11 Direct the local municipalities to only permit development and site alteration on adjacent lands to protected heritage property where the proposed property has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved.*

The Cultural Heritage Report concludes that surrounding cultural heritage landscapes and built heritage resources will not be impacted by the proposed Caledon Pit/Quarry. It is noted that the majority of the proposed Caledon Pit/Quarry does not include significant built heritage resources and significant cultural heritage landscapes and portions of five listed (not designated) or inventoried heritage properties are located within the proposed Caledon Pit/Quarry and contain cultural heritage potential. The potential heritage attributes within each of these five properties have been identified on the Aggregate Resources Act Site Plans and no site alteration or development is permitted until a Heritage Impact Assessment is completed. It is concluded that based on the recommendations of the report, significant built heritage resources and significant cultural heritage resources are conserved.

- 3.6.7 In cooperation with the local municipalities, ensure the adequate assessment, preservation or mitigation, where necessary or appropriate, of archaeological resources, as prescribed by the Ministry of Heritage, Sport, Tourism and Culture Industries’ archaeological assessment standards and guidelines.*
- 3.6.12 Direct the local municipalities to only permit development and site alteration on lands containing archaeological resources or areas of archaeological potential if the significant archaeological resources have been conserved by removal and documentation, or by preservation on site, consistent with provincial requirements. Where significant archaeological resources must be preserved on site, only development and site alteration which maintain the heritage integrity of the site may be permitted.*

A ‘Stage 1 and 2 Archaeological Assessment’ was completed for the proposed CBM Caledon Pit / Quarry and identified 10 Euro-Canadian sites and 4 Pre-contact Indigenous sites for which a Stage 3 Assessment has been recommended. These sites will be protected from any site alteration until such time as they are cleared (through subsequent Archaeological Assessment(s)).

The transportation system in Peel is comprised of many different modes, including freeways, major roads and local roads. Transportation policies in the Regional Official Plan guide the development and strengthening of a regional network to accommodate current and projected travel demands of the people who live, work or travel within or through the Region. Section 5.10 contains the following relevant objectives and policies related to transportation and the proposed CBM Caledon Pit / Quarry:

- “5.10.3 To optimize the use of existing Regional transportation infrastructure and services by prioritizing the safe, sustainable and efficient movement of people and goods by all modes.*
- 5.10.14 Coordinate transportation and land use planning in order to develop context sensitive solutions to accommodate travel demand for all modes in consultation with the appropriate stakeholders.*

The Major Road Network in Peel provides for inter- and intra-municipal travel within Peel and for connections to other regions/municipalities and the Provincial Freeway Network. The network is comprised of major roads under the jurisdiction of the Province of Ontario (Highways 9 and 10 in Caledon), the Region (Charleston Sideroad) and the local municipalities. The proposed CBM Caledon Pit / Quarry is proposing to utilize an access on Charleston Sideroad. The proposed truck distribution / haul route includes 95% of truck traffic heading east on Charleston Sideroad towards Hurontario Street (with 90% travelling south and 5% travelling north on Hurontario Street) and the remaining 5% truck traffic heading west on Charleston Sideroad. The proposed haul route is an existing and identified haul route in the Town of Caledon Official Plan. The Transportation Impact Study and Haul Route Assessment concludes that with the implementation of the recommendations, the proposed truck traffic from the CBM Pit / Quarry will not have unacceptable impacts on the safe and efficient use of the road network

- 5.10.36.11 Protect the designated Regional rights-of-way requirements, as shown on Schedule F-3, to accommodate future road improvements consistent with Section 7.10 of this Plan.*

It is recognized that the ultimate right-of-way for Regional roads Charleston Sideroad and Main Street is 30 m, and the ultimate road ROW for Mississauga Road (local road) is 26 m and for Cataract Road (local road) is 20 m. The CBM Caledon Pit / Quarry Site Plans reflect these ultimate road ROW and Draft Reference Plans have been prepared to reflect the ultimate road widenings required to achieve these ROWs.

5.10.36.15 Control access to Regional roads so as to optimize road safety and carrying capacity, and control number and location of intersections with Regional roads in consultation with the affected local municipality. Where feasible, and consistent with context, access to developments should be obtained via municipal roadways and not Regional roads.

The preferred location of the proposed Site access is along Charleston Sideroad (Regional Road 24) between Mississauga Road and Main Street (Regional Road 136) / Cataract Road. The Site access is recommended to be located approximately 600 metres east of Mississauga Road and 720 metres west of Regional Road 136, measured between curb extensions. Access considerations included existing haul route restrictions, impact to existing residents, access spacing requirements in accordance with Region of Peel Road Characterization Study (RCS) and TAC guidelines, physical constraints, and safety considerations.

The above analysis demonstrates that the proposed CBM Caledon Pit / Quarry is permitted and will be developed in conformity with the objectives and policies in the Region of Peel Official Plan.

9.6 Town of Caledon Official Plan (2018)

The Town of Caledon Official Plan is a statement of principles, goals, objectives and policies intended to guide future land use, physical development and change. It also takes into account the social, economic and environment impact of growth and development in Caledon. The plan contains policies that govern land use in the Town. The Town of Caledon Official Plan Office Consolidation April 2018 was used for this analysis.

The Town of Caledon's aggregate resource mapping and policies refine the identified Regional HPMARA for protection at the local level and allow mineral aggregate resources to be made available for use, where this use can be balanced and integrated with the ecosystem, social and economic goals of the Town of Caledon. Within the Town of Caledon Official Plan, the Subject Site is identified as Caledon High Potential Mineral Aggregate Resource Area (CHPMARA) (**Figure 6**), and is designated 'General Agricultural Area', 'Rural Lands', and 'Environmental Policy Area' (**Figure 19: Excerpt Town of Caledon Official Plan Schedule A Land Use Plan**).

The Town’s ecosystem planning and management policies help ensure the integrity of the natural environment, which is essential to the social and economic well-being of the Town. The following policies from Sec 3.2 (Ecosystem Planning and Management) help to establish a broad framework for ecosystem planning, and these policies are supplemented with more detailed policy directives related to mineral aggregate resources and proposed aggregate operations in a later section of the Official Plan (Sec. 5.11 discussed later in this Report).

“3.2.2.1.3 *To protect, maintain, and, as appropriate, enhance and restore physical and biological systems and features that support ecosystem integrity and associated functions, processes, attributes and values, including:*

- *Bedrock and surficial geology;*
- *Landforms, topography and soils;*
- *Groundwater and aquifers;*
- *Surface water systems including: watersheds and sub-watersheds; rivers and streams (permanent and intermittent); valley and stream corridors; and, lakes and ponds;*
- *Fisheries and wildlife;*
- *Wetlands and woodlands; and,*
- *ANSIs and ESAs.”*

The proposed CBM Caledon Pit / Quarry will protect and enhance the physical and biological systems and features identified on Site and on surrounding lands, and this is discussed in the technical reports prepared, including the Natural Environment Report and the Water Report Level 1/2 and the Maximum Predicted Water Table Report.

“3.2.3.1 *Ecosystem Framework*

The Ecosystem Framework outlined on Table 3.1 organizes ecosystem components into four categories:

- Natural Core Areas*
- Natural Corridors*
- Supportive Natural Systems*
- Natural Linkages*

It should be noted that this Ecosystem Framework incorporates and refines the components of the Regional Greenlands System, as defined in the Region of Peel Official Plan, in a manner which conforms with the environmental policy directions contained in the Region of Peel Official Plan..... Within the Greenbelt Plan Protected Countryside designation, this framework incorporates Key Natural Heritage Features (KNHF’s) and Key

Hydrologic Features (KHF), and their related Vegetation Protection Zones, as defined in the Greenbelt Plan, and lands within 120 metres of such features.

- 3.2.4.3 *The Ecosystem Framework shall contain: Natural Core Areas; Natural Corridors; Supportive Natural Systems; and Natural Linkages, and each category shall be comprised of the ecosystem components identified in Table 3.1.”*

The Natural Environment Report provides a summary of all features and their functions which are within the Subject Site limits. Natural Core Areas which are on the Site (and within the proposed extraction area) include woodlands C and G, and the SAR habitat for little brown myotis, eastern small-footed myotis, bobolink and eastern meadowlark. As noted in the Natural Environment Report, mineral aggregate extraction may be permitted within Woodland Core Areas where the feature does not meet any criteria to be considered a Regional Core Area, and where ecological attributes and linkages can be retained or replaced at an equal or higher amount through rehabilitation. It is confirmed that woodland C and G are not considered Regional Core Areas. Accordingly, mineral aggregate extraction is permitted in this area.

Further, as noted in the Natural Environment Report, although SAR habitat was identified on the Site and within the extraction area, these areas are not considered significant habitat of endangered or threatened species and therefore do not qualify as a Natural Core Area. However, it is confirmed that these are habitats that meet the definition of a Greenbelt KHNF. It is confirmed in the Natural Environment Report that mineral aggregate extraction may be permitted within Greenbelt KNHFs and KHFs where the feature does not satisfy any other criteria of Section 5.11.2.2.5 (areas where mineral aggregate resource extraction is prohibited, and discussed later in this Report), and where the feature will be retained or replaced through progressive rehabilitation. It is confirmed in the Natural Environment Report that the SAR habitat do not satisfy those criteria set out in Section 5.11.2.2.5 and the Town permits development in these areas in accordance with provincial legislation. Accordingly, mineral aggregate extraction is permitted in these areas. Equal to or more replacement habitat will be provided to compensate for the loss of the SAR during rehabilitation.

Natural Core Areas and Natural Corridors which are on Site but outside of the extraction area include Tributary #1 which is a stream corridor, and unevaluated wetlands #1, 3, 4 and 5. It is confirmed in the Natural Environment Report that Tributary #1 and the Credit River drain into an area more than 125 ha and, accordingly, extraction is prohibited within these features. Extraction will be set back a minimum of 30 m from Tributary #1, as well as from wetland Units #3, 4 and 5, which are considered Greenbelt KNHFs. It is noted that these features will be retained with a 30 m setback and a 10 m VPZ to the limit of extraction. Accordingly, mineral aggregate extraction may be permitted within these features. Wetland Unit #1 is confirmed to not meet the size criterion

to be assessed and no significance ecological functions were identified that would warrant it for assessment. Further, this wetland Unit will be replaced through ecological enhancements planned for rehabilitation.

Supportive Natural Systems and Natural Linkages on site, within the extraction area include woodland F. It is noted in the Natural Environment Report that woodland F does not meet any criteria to be considered a Regional Core Area and it has been demonstrated that significant ecological attributes will be retained or replaced with progressive rehabilitation. Accordingly, mineral aggregate extraction is permitted in this location.

Section 3.2.5 sets out performance measures for each component of the ecosystem framework. It is noted that for mineral aggregate resource operations, policy directives set out in Section 5.11.2.2.6 provide additional, superseding performance measures for certain features. Below is a summary of applicable policies of Section 3.2.5:

“3.2.5.1 Applicability

All development within the Town of Caledon must satisfy these performance measures. New development adjacent to an EPA will address the performance measures through the required EIS and MP. New development outside of these areas will be required to demonstrate adherence to the policies and performance measures of this plan through the completion of appropriate investigations and studies, or through specific implementation requirements, as determined jointly by the Town and other relevant agencies, prior to any approvals being granted. This may include the completion of an EIS and MP.

3.2.5.3.5 Management and restoration of Woodland Core Areas and Other Woodlands shall adhere to the Town’s ecosystem principle, goal, objectives, policies and performance measures, as well as any relevant policies or guidelines established by the Ministry of Natural Resources and Forestry, the Conservation Authority, the Niagara Escarpment Plan, where applicable, or other delegated Authority....”

Woodlands C and G are located on Site and within the Extraction Area have been evaluated in the Natural Environment Report and it has been confirmed that woodlands C and G are not considered Regional Core Area and do not have any significant ecological functions or linkages to other significant natural features. These woodlands are proposed to be removed as part of the proposed extraction and a total of 52.2 ha woodland area will be recreated through rehabilitation on Site, plus an additional 15.5 ha of woodland will be established south of the licence limit, thereby compensating for the loss of woodlands C and G. With the implementation of best management

practice mitigation measures and the creation of a net gain of woodland area during progressive rehabilitation, no net negative impacts on Other Woodlands are expected to result from the proposed extraction.

Woodlands B and D are located off Site and have been evaluated in the Natural Environment Report. It has been confirmed that woodlands B and D are composed of large, mature trees and are considered significant and, accordingly, extraction will be setback a minimum of 15 m from the woodlands and a 10 m VPZ will be implemented. As noted in the Natural Environment Report, the minimum 15 m setback measured from the dripline is expected to be sufficient to protect the woodland root zone and it has been noted that the proposed minimum 15 m setback is greater than the minimum protection distance recommended by surrounding municipalities. Further, the minimum 15 m setback will be reforested as part of the rehabilitation plans. As well, the 10 m VPZ will be subject to no disturbance and is expected to be sufficient to protect the root zone for trees within woodlands B and D.

“3.2.5.4.6 Management and restoration of Wetland Core Areas, Other Wetlands and Wetland Adjacent Lands shall adhere to the Town's ecosystem principle, goal, objectives, policies and performance measures, as well as any relevant policies or guidelines established by the Ministry of Natural Resources and Forestry, the Conservation Authority and the Niagara Escarpment Plan, where applicable, and shall generally be implemented through an approved management plan.”

Unevaluated wetland Unit # 1 is located on Site but outside of the extraction area and is proposed to be removed for the construction of a berm and replaced with equal to or more replacement habitat through rehabilitation. This wetland Unit has been evaluated in the Natural Environment Report and it has been confirmed that it does not consist of any significant ecological functions or linkages to other significant natural features. Unevaluated wetland Units #3, 4 and 5 will be protected with a 30 m setback and a 10 m VPZ, as Units #3 and 4 meet the minimum size criterion and are recommended to be complexed with the existing non-significant and adjacent Coulterville Wetland Complex. Wetland Unit # 5 did not meet the size criterion and does not have any significant ecological functions identified within it; however, it is proposed to preserve and enhance this feature with a min 30 m setback and 10 m VPZ, as well.

“3.2.5.5.1 New development within Life Science ANSIs is prohibited in accordance with Section 5.7, with the exception of the permitted uses as specified in policy 5.7.3.1.2.”

As confirmed through the Natural Environment Report, there are no ANSIs on site. Off-Site, southeast of the Site, the Caledon Meltwater Deposits – Forks of the Credit Earth Science ANSI is located approximate 400 m south of the Site. This feature will not be impacted by the proposed extraction.

“3.2.5.9.1 New development within the Significant Habitat of Threatened and Endangered Species is prohibited in accordance with Section 5.7, with the exception of the permitted uses as specified in policy 5.7.3.1.2 or as may be permitted in accordance with provincial and federal legislation and policies (e.g. Endangered Species Act).”

The Natural Environment Report confirms that although SAR habitat was identified on the Site for little brown myotis and eastern small-footed myotis (woodlands F and G) and bobolink and eastern meadowlark (pastures northeast of Charleston Sdrd. and Mississauga Road), these are not considered significant habitat of endangered or threatened species because woodlands F and G were assessed to be part of a roost network, but not a primary roosting area and, specifically, are not relied on as a critical resource for survival and reproduction. Further, the field supporting bobolink and eastern meadowlark are agricultural fields that are actively used for livestock and may also be planted in crop during some years. Accordingly, the fields are considered agricultural and do not represent a permanent or significant habitat for these grassland birds.

“3.2.5.12.5. Restoration and enhancement of Valley and Stream Corridors is encouraged. Where appropriate, a riparian habitat zone shall be maintained or established on lands abutting watercourses and waterbodies to the satisfaction of the Town, the relevant Conservation Authority, the Niagara Escarpment Commission, where applicable, and the Ministry of Natural Resources and Forestry.”

The small valleyland associated with Tributary #1 on the Site is considered a Supporting Valleyland by CVC and it is confirmed that extraction will be setback a minimum of 30 m from the Tributary and a VPZ of 10 m will be implemented. Accordingly, no direct impacts to this valleyland are expected. It is confirmed in the Natural Environment Report that with the implementation of best management practices and mitigation measures and enhancements during progressive rehabilitation, no negative impacts on the valleylands are expected to result from extraction.

“3.2.5.13.1 New development must ensure that the quality and quantity of groundwater recharge and discharge and the flow distribution of groundwater (including ground water - surface water interconnections and contributions to stream base flow) are protected, maintained, and, where appropriate, enhanced and restored.

- 3.2.5.13.6 *New development shall not negatively impact the quality and quantity of groundwater aquifers.*
- 3.2.5.13.8 *New development applications which may have an impact on groundwater resources, including new water taking uses, shall be required to complete all necessary hydrogeological investigations prior to any approvals being granted. Study requirements shall be determined jointly by the Town and other relevant agencies and may include the completion of an EIS and MP.”*

The Water Report Level 1/2 confirms that the quality and quantity of groundwater recharge and discharge and the flow distribution of groundwater will be protected, maintained, enhanced and restored with the implementation of recommendations during operations. It is also confirmed that the proposed Caledon Pit / Quarry does not result in any additional risk to the aquifer, and the groundwater recharge function of the area will be maintained.

Section 3.3 of the Town’s Official Plan contains policy directives aimed at recognizing and managing cultural heritage resources that are of historical, architectural and archaeological value. There are three key components within cultural heritage resources, including archaeological, built heritage resources and cultural heritage landscapes.

“3.3.3.1.4 *Cultural Heritage Surveys*

All development or redevelopment proposals will be reviewed by the Town to determine whether a Cultural Heritage Survey is required or whether, as appropriate, a Cultural Heritage Survey will be requested. In making this determination, the Town will consider the scope of the proposal and, through reference to the archaeological master plan, built heritage resources inventory, cultural heritage landscape inventory, or local information, the likelihood of significant cultural heritage resources being encountered.

Where a Cultural Heritage Survey is required, the proponent is encouraged to consult with the Town and other relevant agencies concerning the scope of the work to be undertaken. The Cultural Heritage Survey will be the responsibility of the proponent and must be undertaken by a qualified professional with appropriate expertise, and it should generally:

- a) Identify the level of significance of any cultural heritage resources, including archaeological resources and potential, existing on and in close proximity to the subject lands; and,*
- b) Make recommendations for the conservation of the cultural heritage resources including whether a Cultural Heritage Impact Statement should be prepared.*

The Cultural Heritage Report concludes that surrounding cultural heritage landscapes and built heritage resources will not be impacted by the proposed Caledon Pit/Quarry. It is noted that the majority of the proposed Caledon Pit/Quarry does not include significant built heritage resources and significant cultural heritage landscapes and portions of five listed (not designated) or inventoried heritage properties are located within the proposed Caledon Pit/Quarry and contain cultural heritage potential. The potential heritage attributes within each of these five properties have been identified on the Aggregate Resources Act Site Plans and no site alteration or development is permitted until a Heritage Impact Assessment is completed. It is concluded that based on the recommendations of the report, significant built heritage resources and significant cultural heritage resources are conserved.

3.3.3.1.5 Cultural Heritage Impact Statements

- a) Where it is determined that further investigations of cultural heritage resources beyond a Cultural Heritage Survey or Cultural Heritage Planning Statement are required, a Cultural Heritage Impact Statement may be required. The determination of whether a Cultural Heritage Impact Statement is required will be based on the following:*
 - i) the extent and significance of cultural heritage resources identified, including archaeological resources and potential, in the Cultural Heritage Survey or Cultural Heritage Planning Statement and the recommendations of the Cultural Heritage Survey or Cultural Heritage Planning Statement;*
 - ii) the potential for adverse impacts on cultural heritage resources; and,*
 - iii) the appropriateness of following other approval processes that consider and address impacts on cultural heritage resources.*

b) Where it is determined that a Cultural Heritage Impact Statement should be prepared, the Cultural Heritage Impact Statement shall be undertaken by a qualified professional with expertise in heritage studies and contain the following:

i) a description of the proposed development;

ii) a description of the cultural heritage resource(s) to be affected by the development;

iii) a description of the effects upon the cultural heritage resource(s) by the proposed development;

iv) a description of the measures necessary to mitigate the adverse effects of the development upon the cultural heritage resource(s); and,

v) a description of how the policies and guidance of any relevant Cultural Heritage Planning Statement have been incorporated and satisfied.

Where a Cultural Heritage Impact Statement is required, the proponent is encouraged to consult with the Town and other relevant agencies concerning the scope of the work to be undertaken.”

3.3.3.1.6 Appropriate Mitigation

Where a Cultural Heritage Survey, Cultural Heritage Planning Statement or Cultural Heritage Impact Statement has identified a development property as having archaeological potential, no pre-approval site grading, servicing or other soil disturbance shall take place prior to the Town and/or appropriate Provincial Ministry confirming that all archaeological resource concerns have met licencing and resource conservation requirements.

As noted above, Heritage Impact Assessments (HIAs) are being undertaken for potential heritage attributes located on five listed (not designated) or inventoried heritage properties that are located within the proposed Caledon Pit/Quarry and contain cultural heritage potential. Until that is complete, a 50 m construction radius will be established for no site alteration. These potential heritage attributes will be conserved until an HIA is prepared. After the HIAs are prepared, evaluation of each property will be known and any site specific mitigation will be implemented.

3.3.3.2.2 *Archaeological Assessment Requirements and Proposed Development*

Where an acceptable Cultural Heritage Survey, carried out in accordance with Section 3.3.3.1.4, identifies archaeological sites or areas of archaeological potential on lands proposed for development or redevelopment, or on adjacent lands, the Town shall require archaeological assessments of the lands proposed for development to be undertaken by a licenced archaeologist as a condition of approval. The archaeological assessment shall be carried out in accordance with current Provincial guidelines.

3.3.3.2.3 *Where it is demonstrated that an identified archaeological site, feature or artifacts cannot be left undisturbed, appropriate mitigation will be required on the advice of a licenced archaeologist according to current Provincial guidelines.”*

The Stage 1 and 2 Archaeological Assessment identified 10 Euro-Canadian sites and 4 Pre-contact Indigenous sites for which a Stage 3 Assessment has been recommended. Each of these sites have met the requirements under the MTCS’s Standards and Guidelines for Consultant Archaeologists requiring a Stage 3 Assessment. For each of these archaeological sites within the Subject Site, it is recommended that these sites are avoided and protected by establishing a 70 m “Archaeological Protection Area” around the extent of each site, until the requisite Stage 3 Assessment is completed (and possibly Stage 4 Mitigation, if necessary). These “Archaeological Protection Areas” have been identified on the ARA Site Plans for the proposed CBM Caledon Pit / Quarry and site alteration is prohibited within these limits until such time as the Stage 3 (and possibly Stage 4) Archaeological Assessments are completed and clear these sites. The Stage 3 Assessments are currently underway and will be submitted to the Ministry upon completion.

As already noted, the Subject Site is currently designated “General Agricultural Area”, “Rural Lands”, and “Environmental Policy Area” in the Town’s Official Plan (**Figure 19**). Section 5.0 in the Town’s Official Plan contains policies for the different land use designations within the Town and are briefly discussed below; however, it is important to note that a more fulsome discussion of policy directives related specifically to mineral aggregate resources and future operations is found later in this Report, under Section 5.11 (Mineral Aggregate Resources) from the Town’s Official Plan.

“5.1.2.2 *General Agricultural Areas have similar high capability for agriculture as the Prime Agricultural Area designation, but are more limited in area and more isolated than the Prime Agricultural Area. Agricultural productivity will be encouraged. While agriculture is important and the vision for the General Agricultural Area is similar to the Prime Agricultural Area, there may be increased opportunities, in appropriate circumstances, to allow rural economic development uses.*

“5.2.2 *...Caledon’s vision for its Rural Lands is:*

“Creating vital Rural Lands where the open countryside character and natural and cultural heritage is protected and promoted to attract visitors. Existing agricultural uses will be protected and new appropriate agricultural uses encouraged. At the same time, limited compatible rural economic development uses, where suitable, will be encouraged.”

The Rural Lands designation on Schedule A, Land Use Plan, and Schedule M, Inglewood Village and Area Land Use Plan, generally coincides with those lands which demonstrates lower capability for agriculture, contains extensive lot fragmentation, existing agricultural production and are where Caledon’s High Potential Mineral Aggregate Resource Areas are identified.”

As already noted, an amendment to the Town of Caledon Official Plan to redesignate the subject Site to “Extractive Industrial B Area” which is proposed to facilitate the proposed aggregate extraction. As well, the existing “Environmental Policy Area” land use designation in the northwest corner of the Site (**Figure 19**) is proposed to be refined through the proposed applications to more accurately depict the feature in that location (Tributary #1 and related setback buffer). Accordingly, the OPA proposed for this Site seeks a designation of “Environmental Policy Area” in the northwest corner of the Site, and “Extractive Industrial B Area” on the balance of the Site.

In keeping with the ecosystem planning strategy and policies noted above (from Section 3.2 of the Official Plan), Section 5.7 of the Official Plan contains objectives and policy directives for lands designated “Environmental Policy Area”. The features in the Northwest portion of the Site have been specifically assessed and mapped through the Natural Environment Report and it is confirmed that these features will have a 30 m setback to extraction and a 10 m VPZ to ensure their protection. Accordingly, the “Environmental Policy Area” designation is being refined to more accurately depict Tributary #1 and the associated VPZ through the proposal.

- “5.7.3.1.2 *The uses permitted in EPA shall be limited to: legally existing residential and agricultural uses; a building permit on a vacant existing lot of record; portions of new lots; activities permitted through approved Forest Management and Environmental Management Plans; limited extractive industrial; non-intensive recreation; and, essential infrastructure. Detailed policies with respect to each of these permitted uses are provided in Sections 5.7.3.2 to 5.7.3.7 inclusive. Within the ORMCPA or the Greenbelt Protected Countryside designation, permitted uses are also subject to the provisions of Sections 7.10 and 7.13, as applicable. Refer to Section 6.6.3.3 of this Plan for further policies respecting conflicts between the policies of this Plan and the PPS and Provincial Plans.*”
- 5.7.3.1.4 *As more detailed environmental information becomes available, such as information derived from approved studies or site investigations/inspections, minor refinements to the limits of lands designated EPA on the Schedules to this Plan, including minor additions or deletions, may be permitted without an amendment to this Plan, provided such a minor refinement is satisfactory to the Town and other relevant agencies....*
- 5.7.3.1.5 *Major modifications to the limits of lands designated EPA on the Schedules to this Plan, including major additions or deletions, shall only occur through an amendment to this Plan.*”

As noted in the Natural Environment Report, mineral aggregate extraction may be permitted within woodlands C and G since these woodlands do not meet any criteria to be considered a Regional Core Area, and since it has been demonstrated that ecological attributes and linkages can be retained or replaced at an equal or higher amount through rehabilitation. As well, while SAR habitat was identified on the Site and within the extraction area, these areas are not considered significant habitat of endangered or threatened species and therefore do not qualify as a Natural Core Area. However, since these are habitats that meet the definition of a Greenbelt KHNF, and since unevaluated wetland #1 is also a Greenbelt KNHF, the Natural Environment Report evaluates these features and confirms that mineral aggregate extraction may be permitted in these features since the features do not satisfy any other criteria of Section 5.11.2.2.5 (areas where mineral aggregate resource extraction is prohibited, and discussed later in this Report), and where the feature will be retained or replaced through progressive rehabilitation.

It is noted that the above noted features are not currently mapped within the Town’s “Environmental Policy Area” designation on Site; rather, only Tributary #1 is within the “Environmental Policy Area” designation currently. Notwithstanding that, rationale from an ecological perspective has been presented to support the proposal to redesignate these lands from

the current “General Agricultural” and “Rural Lands’ designations to the “Extractive Industrial B Area” land use designation. Further, the proposal seeks to refine the “Environmental Policy Area” designation which relates to Tributary #1, to present a more accurate delineation of the feature and its surrounding protection area.

Section 5.9 in the Town’s Official Plan contains objectives and policy directives related to the Town’s transportation system. The transportation system is designed to service existing and future land uses and to facilitate the safe and efficient passage of people and goods throughout the Town. The Official Plan recognizes the important relationship between existing and future development and all transportation modes and their elements. It is also recognized that trucks will continue to play a dominant role in the movement of goods, and that it is important that the Town and Region plan for a transportation system that provides truck traffic with access to an efficient network of highways and arterial roads.

“5.9.4.2 *The transportation policies should be read in conjunction with Schedule J, the Long Range Road Network, and Schedule K, Public Right-of-Way Widths.*

5.9.5.2.9 *The road network will be based on the following functional classification system as shown on Schedule J:*

b) HIGH CAPACITY ARTERIALS

- i) Are roadways under Provincial or Regional jurisdiction.*
- ii) Serve high volumes of medium to long distance inter and intra-regional traffic at moderate speeds and will provide access to major attraction centres.*

- iii) Will generally have a 30 to 50 metre road allowance width with 2 to 6 lane capability and limited property access.*
- iv) On-street parking will be discouraged.*

As illustrated on **Figure 20: Excerpt from Town of Caledon Schedule J: Long Range Road Network**, Charleston Sdrd / RR 24 and Main Street / RR 136 are both shown as High Capacity Arterial Roads in the Town’s Official Plan. A haul route assessment was undertaken to determine the location of the new future Site access for the Caledon Pit / Quarry and assessed several Site access considerations including existing haul route restrictions, impact to existing residents, access spacing requirements, physical constraints, and safety considerations. It was determined that the preferred location of the proposed Site access is along Charleston Sideroad (Regional Road 24)

between Mississauga Road and Main Street (Regional Road 136) / Cataract Road. The proposed haul route is an existing and identified haul route in the Town of Caledon Official Plan.

“5.9.5.2.11 The Town will seek to achieve the necessary right-of-way widths and provide the number of lanes within the range set in this plan. Necessary right-of-way widths will be acquired through Secondary Plan process and/or conditions of approval for subdivisions, severance, or site plans, or through purchase, expropriation, gift, bequeathment or other appropriate means.”

An ultimate ROW of 30 m has been envisioned for Charleston Sdrd. and Main Street, consistent with the Region of Peel Official Plan and the Town of Caledon Official Plan. Mississauga Road is envisioned to have a ROW of 26 m. These ultimate road widths are reflected on the ARA Site Plans and also on the Draft Reference Plans prepared by Delph & Jenkins Surveyors submitted with this application package.

“5.9.5.10 Trucking and Goods Movement

Goods movement is an important aspect of the overall transportation system. Safe and efficient movement of goods and services within and through the Town is essential for sustainable economic growth and is an important component of the Town’s economy in attracting and retaining a wide range of industries and businesses. In order to gain a competitive edge, the Town needs to ensure that goods are transported in an efficient and timely manner by utilizing integrated transportation networks. The movement of trucks in the Town is regulated by means of a By-law, which restricts heavy truck movement to certain parts of the arterial road network and also regulates vehicle weights relative to the carrying capacity of roads and bridges.”

The proposed haul route utilizing Charleston Sideroad (including 95% of truck traffic heading east on Charleston Sideroad towards Hurontario Street (with 90% travelling south and 5% travelling north on Hurontario Street) and the remaining 5% truck traffic heading west on Charleston Sideroad) is an existing and identified haul route in the Town of Caledon Official Plan. With the implementation of the recommendations, the proposed truck traffic from the CBM Pit / Quarry will not have unacceptable impacts on the safe and efficient use of the road network.

Additional policy directives related specifically to mineral aggregate resource transport and haul routes is contained in the following pages of this Report, under Section 5.11 (Mineral Resources).

The Town's Mineral Aggregate policies are based on the need to balance the protection, use and enjoyment of these human and environmental features with the sometimes competing priorities for the protection of the mineral aggregate resources for future extraction. Section 5.11 contains detailed objectives and policies related to mineral aggregate resources, including the following:

- “5.11.1 Town-Wide Aggregate Management Objectives*
- 5.11.1.1 To ensure that the extraction of aggregate resources is undertaken in a balanced manner which adheres to the Ecosystem Planning and Management Objectives contained in Section 3.2 of the Plan and which will recognize Caledon's community character and social values over the short and long-term*
- 5.11.1.3 To provide a framework to allow as much of the aggregate resource as is realistically possible to be made available for use.*
- 5.11.1.5 To minimize the impact of aggregate related traffic on the community.*
- 5.11.1.6 To establish a set of clear, balanced, and standard criteria for evaluating applications for new or expanded aggregate operations that will contribute to achieving the goals and objectives of this Plan.*
- 5.11.1.7 To minimize the disturbed area and achieve beneficial end uses by encouraging and promoting the speedy, progressive and final rehabilitation of both new and older aggregate operations and the preparation of a Rehabilitation Master Plan for each of the ten aggregate resource areas.*

Technical reports addressing key natural heritage features, cultural heritage resources, visual, water resources, agricultural, noise, air quality, blasting, and traffic have been completed to evaluate the proposal. The design of the CBM Caledon Pit / Quarry will protect and enhance key natural heritage features and key hydrologic features and water resources, will conserve cultural heritage resources, and will screen the active extraction area to maintain the open landscape character of the area. As well, the proposal will minimize and mitigate impacts on surrounding agricultural lands and operations, and will mitigate impacts from a noise, visual and blasting perspective, and will enhance the natural environment through the off-Site ecological enhancement plan and the progressive and final rehabilitation plan by creating a landform that is suitable for conservation, recreation, and water management and that is compatible with surrounding land uses.

- 5.11.2.1.2 *Those areas identified as CHPMARA have been prioritized as Aggregate Resource Lands and Aggregate Reserve Lands as shown on Schedule L. New pits and quarries are encouraged to locate in Aggregate Resource Lands as those lands have been determined to be suitable for aggregate extraction subject to Sections 5.11.2.4.1, 5.11.2.4.2 and 5.11.2.4.3 and shall be designated to Extractive Industrial A Area or Extractive Industrial B Area subject also to Sections 5.11.2.4.1, 5.11.2.4.2 and 5.11.2.4.3. New pits and quarries will be considered in Aggregate Reserve Lands. It is the intent of this Plan that Aggregate Reserve Lands will be considered for Extractive Industrial A Area or Extractive Industrial B Area subject to the Applicant providing a planning justification having regard to the potential impacts that affect the broader community, that the location is suitable for aggregate extraction and subject to meeting the requirements of Section 5.11.2.4.4.*
- 5.11.2.1.3 *Both Aggregate Resource Lands and Aggregate Reserve Lands as shown on Schedule L may be designated to permit extraction during the life of this Plan subject to the goals, objectives and policies of this Plan. An Applicant shall not be required to prove need (including any type of supply/demand analysis) for the mineral aggregate resource.*

The Subject Site is mapped CHPMARA in the Town’s Official Plan (**Figure 6**) and CHPMARA includes the primary and secondary sand and gravel resource areas and bedrock resources located in the Town. These are areas in Caledon where mineral resource extraction is anticipated and expected. This mapping reflects and reinforces the Site’s importance and significance as an aggregate resource area in Peel and in Caledon. The proposal will optimize the long-term availability of mineral aggregate resources in Peel/Caledon and the Site is located close to market and will be an efficient, cost-effective development that will ultimately assist in ensuring reduction in greenhouse gas emissions.

5.11.2.2 *Extractive Industrial Designations*

- 5.11.2.2.1 *Existing extractive operations are designated Extractive Industrial Area on Schedule A to this Plan. The Extractive Industrial Area designation does not distinguish between above and below water table extraction. New operations or expansions to existing operations will be designated either Extractive Industrial A Area for above water table extraction or Extractive Industrial B Area for above and below water table extraction. An amendment to this Plan will be required to change an extractive operation from Extractive Industrial A Area to Extractive Industrial B Area ...”*

- 5.11.2.2.3 *The Town of Caledon will not support any application for a new licence until an Official Plan Amendment designating the land Extractive Industrial A Area or B Area on Schedule A has been adopted and a rezoning permitting extractive industrial uses (or a resolution supporting the Niagara Escarpment Commission Development Permit) has been passed by Council.*
- 5.11.2.2.4 *The permitted uses for lands designated Extractive Industrial Area, Extractive Industrial A Area or Extractive Industrial B Area on Schedule A are:*
- a) *The extraction of mineral aggregate resources from licenced sand and gravel pits and quarries and the rehabilitation of extracted areas. The extraction must be above water table only for Extractive Industrial A Area, and may be for either above water table and/or below water table extraction for Extractive Industrial B Area....*
 - b) *Accessory uses essential to the extractive operation, such as crushing, screening, washing, stockpiling, blending with recycled asphalt or concrete materials, storage, weigh scales, maintenance, repair and fuel storage for vehicles related to the extraction operation, and office facilities, and clay products manufacturing, subject to licencing.*

The proposal involves a redesignation of the Subject Site to ‘Extractive Industrial B Area’ to allow for above and below water extraction for the CBM Caledon Pit/Quarry. Accessory uses associated with the proposed CBM Caledon Pit/Quarry would include drilling/blasting/extraction, processing and shipping of aggregate, and Site preparation with respect to stripping, berm creation and progressive rehabilitation. As well, active farming would occur in areas where extraction was not yet occurring. As well, within the extraction area there would be maintenance of equipment used for extraction and processing.

- 5.11.2.2.5 *New or expanded mineral aggregate extraction is prohibited in the following areas:*
- d) *The Core Areas of the Greenland System in Peel designations in the Region of Peel Official Plan;*
 - e) *The Environmental Policy Area designations in the Town of Caledon Official Plan except for those Environmental Policy Areas set out in Sections 3.2.5.9.1, 5.11.2.2.6 and as may be considered in accordance with section 5.11.2.2.8;*

k) Within the Natural Heritage System of the Greenbelt Plan, new mineral aggregate operations and new wayside pits and quarries, or any ancillary or accessory use thereto, area not permitted within significant woodlands unless the woodland is occupied by young plantation or early successional habitat, as defined by the Ministry of Natural Resources and Forestry in accordance with the Greenbelt Plan.

As already noted, there are no Core Areas of the Greenlands or significant woodlands within the Subject Site, including the proposed extraction area on Site. There is “Environmental Policy Area” designation in the northwest portion of the Site associated with the Tributary #1 and associated valleyland and this land use designation will be refined to more accurately depict the feature and the associated VPZ and will be reflected in the proposed Amendments to the Official Plan and Zoning By-Law.

The following specific Caledon Official Plan policies relates to specific features, as follows:

5.11.2.2.6 Mineral aggregate operations may be permitted within and adjacent to:

a) Notwithstanding Sections 3.2.4, 3.2.5.12.1, 3.2.5.12.3, 5.7.3.1.1, 5.7.3.1.2 and 5.7.3.1.6, Environmental Policy Areas that are solely Valley and Stream Corridors draining less than 125 hectares, providing it can be demonstrated that:

- i) the Valley and Stream Corridor has been assessed and does not satisfy any of the criteria for designation as Core Area of the Greenlands System in Peel;*
- ii) the ecological attributes and functions of the Valley and Stream Corridor have been assessed and significant attributes and functions will be retained through retention of all or part of the feature and/or replacement through progressive rehabilitation in a manner that minimizes any interruptions to the significant attributes, functions or linkages;*
- iii) alteration or elimination of the Valley and Stream Corridor will not result in any immediate or longer term negative impacts or cumulative negative impacts on adjacent Core*

Areas of the Greenlands System in Peel, or Environmental Policy Areas;

- iv) the quality, quantity and location of the aggregate resource warrant alteration or elimination of the Valley and Stream Corridor; and,*

It is confirmed in the Natural Environment Report that there are no significant valleylands on Site. Off-Site there is the Credit River Valleyland to the north of the Site which would be considered significant due to surface and groundwater functions, landform prominence, degree of naturalness, species diversity and habitat value, and linkage function. It should be noted that Tributary #1 in the northwest portion of the Site (on Site) is a small valleyland which is considered a supporting valleyland for conveyance, attenuation, storage and release of water, nutrient provision and movement and as productive aquatic habitat. A 30 m setback and a 10 m VPZ will be implemented from this feature to ensure its protection.

- b) Notwithstanding Sections 3.2.4, 3.2.5.4.1, 5.7.3.1.1, 5.7.3.1.2 and 5.7.3.1.6, Environmental Policy Areas that are solely locally significant wetlands, subject to 5.11.2.2.6 d).*

It is confirmed in the Natural Environment Report that there are no significant wetlands on the Site, and the Cataract Southwest PSW is located off-site, in the southeast corner of the Natural Environment Report study area. As well, a portion of the Credit River at Alton PSW is located off-site, in the north portion of the study area.

- c) Notwithstanding Sections 3.2.5.3.1 and 3.2.5.3.2, Woodland Core Areas and Other Woodlands, providing it can be demonstrated that:*

- i) the Woodland has been assessed and does not satisfy the applicable criteria for designation as Core Area of the Greenland System in Peel, as it relates to mineral aggregate resources, in accordance with the Region of Peel Official Plan;*

- ii) the ecological attributes, functions and linkages of the Woodland have been assessed and significant attributes, functions and linkages will be retained through retention of all or part of the feature and/or replacement through progressive rehabilitation in a manner that minimizes any interruptions to the significant attributes, functions or linkages;*

iii) progressive rehabilitation of the site will result in the establishment of an equal amount or a net gain of woodland area and function in as short a time as is feasible, unless below water table extraction precludes re-establishing woodlands on a portion of the site, in which case as much of the site shall be returned to woodland as is feasible and the proponent will be encouraged to implement a program of compensation planting or other alternatives to establish an equivalent area of woodland elsewhere;

iv) alteration or elimination of the Woodland will not result in any immediate or longer term negative impacts or cumulative negative impacts on adjacent Core Areas of the Greenlands System in Peel, or Environmental Policy Areas except as otherwise permitted by this plan;

v) the quality, quantity and location of the aggregate resource warrant alteration or elimination of the Woodland;”

As noted in the Natural Environment Report, there are no significant woodlands on site, and there are four woodlands identified as significant which are located off-Site. These are located to the north (woodland B), east (woodland D and E), and south (woodland H) of the Site and are within the Greenbelt Plan NHS and the Niagara Escarpment Plan Area. Woodlands B and D are immediately adjacent to the proposed extraction area; however, extraction will be set back a minimum of 15 m from these woodlands, and a VPZ of 10 m will be implemented. It is noted in the Natural Environment Report that the majority of the 15 m setback will be reforested as part of the rehabilitation plan, thereby creating a soft edge at the interface, which will be an ecological improvement over the hard edge that currently exists along the woodlands and adjacent agricultural fields.

There are four woodlands located on Site; one outside of the proposed extraction area (woodland A), and three located within the proposed extraction area (woodland C, F and G). As confirmed in the Natural Environment report, woodland A (outside the proposed extraction area) will not be directly impacted by the proposed extraction. Woodlands C, F and G are all identified as Other Woodlands which are proposed to be removed as part of the proposed extraction, and collectively consist of approximately 18.85 ha. The Natural Environment Report confirms that no significant ecological functions or linkages to other significant natural features were identified in any of the woodlands on Site. Further, it noted (and discussed in this Report) that a total of 67.7 ha of forest area will be created during final rehabilitation and off Site to the south of the licence area. It is

confirmed in the Natural Environment Report that with the implementation of best management practices and mitigation measures, and the creation of a net gain in woodland area during progressive rehabilitation, no net negative impacts on significant High Functioning Woodlands, or on Other Woodlands or Supporting Woodlands are expected as a result of the proposed extraction.

d) Notwithstanding Sections 3.2.4, 3.2.5.4.2 and 3.2.5.4.4, Other Wetlands, providing it can be demonstrated that:

i) the Other Wetland has been assessed and does not satisfy any of the criteria for designation as Core Area of the Greenlands System in Peel;

ii) the ecological attributes, functions and linkages of the Other Wetland have been assessed and significant attributes, functions and linkages will be retained through retention of all or part of the feature and/or replacement through progressive rehabilitation in a manner that minimizes any interruptions to the significant attributes, functions or linkages;

iii) progressive rehabilitation of the site will result in the establishment of an equal amount or a net gain of wetland area and function in as short a time as is feasible, unless below water table extraction precludes re-establishing comparable wetlands on a portion of the site, in which case as much of the site shall be returned to wetland as is feasible and the proponent will be encouraged to implement a program of compensation planting or other alternatives to establish an equivalent area of wetland elsewhere;

iv) alteration or elimination of the Other Wetland will not result in any immediate or longer term negative impacts or cumulative negative impacts on adjacent Core Areas of the Greenlands System in Peel, or Environmental Policy Areas except as otherwise permitted by this Plan;

v) the quality, quantity and location of the aggregate resource warrant alteration or elimination of the Other Wetland;”

As noted in the Natural Environment Report, there are no PSWs or evaluated non-significant wetlands on Site and there are five unevaluated wetlands that were mapped on the Site. For each of the unevaluated wetlands on Site, there were no significant ecological functions observed. The wetland referred to as Unit #2 in the Natural Environment Report, which is located on Site and inside of the proposed excavation area, was determined not to be a wetland and accordingly, could not be assessed further. Unit #1 and 5 are located on Site and outside the proposed extraction area, were found to not meet the size criterion, and no significant ecological functions were identified. It is noted in the Natural Environment Report that Unit #1 will be removed to construct a berm; however, 4.8 ha of wetland area will be created during rehabilitation. Units #3, 4 and 5 are also located on Site but outside the extraction area. Extraction will be set back a minimum 30 m from these units, and from the Coulterville Wetland Complex, and a 10 m VPZ will be implemented.

It is noted in the Natural Environment Report, with implementation of best management practices and mitigation measures, and the creation of a net gain in wetland area during final rehabilitation, no net negative impacts on Other Wetlands are expected due to the proposed extraction.

e) Notwithstanding Sections 3.2.5.10.1, 3.2.5.10.2, 3.2.5.10.3, 5.7.3.1.1, 5.7.3.1.2 and 5.7.3.1.6 Core Fishery Resource Areas and Other Fishery Resource Areas within Valley and Stream Corridors draining less than 125 hectares, subject to Section 5.11.2.2.6 a) and provided that it can be demonstrated that extraction will not harmfully alter, disrupt or destroy fish habitat, or that there will be no net loss of productive capacity of fish habitat, and there is a net gain of productive capacity where possible.

Fish habitat was noted to be in the Credit River, which is off Site and outside of the proposed extraction area. The Credit River is not expected to be directly impacted by the proposed extraction. On Site, fish habitat was found to be within Tributary #1, which will be protected with a 30 m setback and a 10 m VPZ. As well, on going monitoring will be conducted on Tributary #1 prior to and during extraction to ensure water levels are maintained. It is noted that with the implementation of best management practices and mitigation measures, and enhancements during progressive rehabilitation, no net negative impacts on Tributary #1 are expected as a result of the proposed extraction.

f) Notwithstanding Section 3.2.5.13.2 groundwater recharge and discharge areas, provided those areas identified through studies as being functionally connected to Core Areas of the Greenlands System in Peel or Environmental Policy Area are protected and/or managed to ensure no negative impacts on the functionally-related feature(s).

Based on the design of the operation, and the implementation of the recommendations contained in the Water Report Level 1/2, the groundwater recharge function of the area will be maintained.

g) Notwithstanding Sections 3.2.4 and 3.2.5.11.1, Environmental Policy Areas that are solely Significant Wildlife Habitat, providing it can be demonstrated that:

i) the ecological attributes, functions and linkages of the Significant Wildlife Habitat have been assessed and significant attributes, functions and linkages will be retained through retention of all or part of the feature and/or replacement through progressive rehabilitation in a manner that minimizes any interruptions to the significant attributes, functions or linkages;

ii) progressive rehabilitation of the site will result in the establishment of an equal amount or a net gain of significant wildlife habitat area and function in as short a time as is feasible, unless below water table extraction precludes re-establishing the affected significant wildlife habitat on a portion of the site, in which case as much of the site shall be returned to significant wildlife habitat as is feasible and the proponent will be encouraged to implement a program of significant wildlife habitat compensation or other alternatives to establish an equivalent area of significant wildlife habitat elsewhere;

iii) alteration or elimination of the Significant Wildlife Habitat will not result in any immediate or longer term negative impacts or cumulative negative impacts on adjacent Core Areas of the Greenlands System in Peel, or Environmental Policy Areas except as otherwise permitted by this Plan; and,

iv) the quality, quantity and location of the aggregate resource warrant alteration or elimination of the Significant Wildlife Habitat.”

It is confirmed in the Natural Environment Report at all SWH is located off-Site and outside of the extraction area and will not be directly impacted by the proposed extraction.

h) Notwithstanding Section 3.2.5.6.2, Potential ESAs subject to subsections 5.11.2.2.6 a) to g).

Potential Environmentally Significant Areas (ESAs) are defined in the Town's Official Plan as areas that exhibit characteristics which have the potential to meet the criteria for ESA designation, as established by the relevant Conservation Authority, and which require further evaluation. It is confirmed there are no Potential ESAs on Site.

“5.11.2.2.6 (continue) Sections 5.11.2.2.6 a) to h) are performance measures within the meaning of Sections 3.2 and 5.7 and are to be interpreted and applied accordingly. By satisfying the performance measures set out in Sections 5.11.2.2.6 a) to h), the Ecosystem Objectives of Section 3.2.2 and the policy relating to additional lands as set out in Section 5.7.3.7.3 are likewise satisfied insofar as they relate to those specific features.”

The above noted policy directive reiterates that certain natural heritage features and their functions are to be evaluated through the above noted policy sections contained in Sec. 5.11.2.2.6 when the evaluation relates to mineral aggregate resource areas. The above noted policy assessment and commentary has been compiled to satisfy this Section of the Official Plan.

5.11.2.2.8 Notwithstanding Section 5.11.2.2.5, new or expanding mineral aggregate operations may be permitted within Greenbelt Key Natural Heritage Features and Key Hydrologic Features, and their associated Vegetation Protection Zones, subject to the following:

a) the Greenbelt KNHF or KHF does not satisfy the criteria for any other area or feature listed in Section 5.11.2.2.5 a) to d), f) to i) and k); and

b) the mineral aggregate operation meets all of the applicable provisions contained in Section 5.11.2.2.6.

Key Natural Heritage Features (KNHFs) identified on Site, and within the proposed extraction limit include SAR habitat for little brown myotis, eastern small-footed myotis, bobolink and eastern meadowlark. These KNHFs do not satisfy the criteria for any feature or area listed in Section 5.1.2.2.5. Further, the proposed CBM Caledon Pit/Quarry has been assessed in the context of all natural heritage features and functions pursuant to the above noted policy Section 5.1.2.2.6 and meets/achieves all relevant policy directives for proposed extraction of the Subject Site.

- 5.11.2.2.9 *Mineral aggregate extraction may be permitted as an interim use in prime agricultural areas on prime agricultural land as defined in the Region of Peel Official Plan and/or the Town of Caledon Official Plan, subject to the policies of this Plan, and provided that rehabilitation of the site will be carried out whereby substantially the same areas and same average soil quality for agriculture are restored. On these prime agricultural lands, complete agricultural rehabilitation is not required if:*
- a) There is a substantial quantity of mineral aggregates below the water table warranting extraction; or*
 - b) The depth of planned extraction in a quarry makes restoration of preextraction agricultural capability unfeasible;*
 - c) Other alternatives have been considered by the Applicant and found unsuitable; and,*
 - d) Agricultural rehabilitation in remaining areas will be maximized.”*

While the portion of the Subject Site west of Main Street is designated Prime Agricultural Area in the Regional Official Plan, it noted that it is designated “General Agricultural Area’ and “Rural Lands’ in the Town of Caledon Official Plan. As already noted, an AIA has been completed and supports the mineral aggregate operation proposed on the subject lands. As well, it is confirmed that because there is substantial resource on Site, and the proposed extraction is below water, rehabilitation to an agricultural use is not required, nor feasible. It is recommended in the AIA that those lands not required for immediate extraction and site preparation be kept in agricultural production for as long as possible.

5.11.2.4 *Applications for Planning Act Approvals to Permit New or Expanded Aggregate Operations*

- 5.11.2.4.1 *The Town of Caledon will process an application for an Official Plan Amendment to designate lands identified as CHPMARA Aggregate Resource Lands on Schedule L for a new extraction operation or an expansion to an existing extraction operation and will require:*

- a) A completed application for an Official Plan Amendment and all the necessary supporting documents and reports;*
- b) An application for an amendment to the Town of Caledon's Zoning By-law and all the necessary supporting documentation and reports, or if the subject property is within the Niagara Escarpment Development Control Area and therefore does not require a rezoning, after the Applicant has submitted all required applications to the Niagara Escarpment Commission under the Niagara Escarpment Planning and Development Act together with all the necessary supporting documentation and reports;*
- c) The Applicant has delivered to the Clerk of the Town of Caledon, in order that they be made available to the public, the detailed site plans required for submission to the Ministry of Natural Resources under the Aggregate Resources Act;*
- d) The Applicant has delivered to the Clerk of the Town of Caledon, in order that they may be made public, any related reports prepared by the Applicant;*
- e) The Applicant has delivered to the Clerk of the Town of Caledon, in order that it may be made public, any other reasonable information as determined by the pre-consultation process described by Section 5.11.2.4.8;*
- f) Confirmation that the Applicant is prepared to enter into agreements with the appropriate public bodies providing that any off-site works, other than road improvements, identified as necessary for the acceptable operation of the pit or quarry by a report prepared pursuant to Section 5.11.2.4.2, will be completed in a timely fashion and that the appropriate share of the cost of such works is to be paid by the Applicant; and,*
- g) Confirmation that the Applicant is prepared to enter into agreements with the appropriate public bodies to ensure the timely completion of any necessary road improvements in accordance with Section 5.11.2.5.*

CBM attended the Town of Caledon's pre-consultation (DART) meeting on February 10, 2022 and subsequently received a checklist for requisite materials to complete the OPA/ZBA submission at the end of April, 2022. Correspondence occurred with Town staff over the course of the month of May and a complete checklist was agreed to with Town staff. Further, Terms of Reference documents were required by the Town to be reviewed prior to submission of a formal application. Terms of Reference documents were submitted to the Town on May 5, 2022 related to agricultural impact, archaeology, cultural heritage, transportation and the haul route, air quality, noise impact, blasting impact, socio-economic impact, visual impact, water resources and natural environment. Over the summer months comments were received from the Town, Region and CVC related to the submissions of the Terms of Reference documents and Terms of Reference documents were finalized and submitted back to the Town on August 25, 2022.

All materials identified on the final DART checklist have been provided to the Town of Caledon in submission of a complete application and in accordance with this Section of the Town's Official Plan.

5.11.2.4.2 The Town of Caledon will approve an application for an Official Plan Amendment to designate lands identified as Aggregate Resource Lands on Schedule L for a new extraction operation or expansion to an existing extraction operation when the following criteria have been met:

a) The Applicant has submitted reports by qualified professionals detailing the manner in which:

i) the application conforms to the intent of the Town-wide aggregate management objectives found within this Plan (Section 5.11.1);

ii) the application conforms to the applicable land use and resource management policies for the specific resource area within which the lands that are the subject of the application are located (Section 5.11.2.10);

iii) the application meets the intent of the Rehabilitation Master Plan, where one has been prepared for the resource area within which the lands that are the subject matter of the application are located unless, in the circumstances, it is demonstrated to be inappropriate;

iv) the application implements the applicable recommendations of a Sub-watershed Study(ies) where these recommendations have been incorporated into this Official Plan;

v) the application conforms to the Ecosystem Planning and Management Policies (Section 3.2), and the Environmental Policy Area Policies (Section 5.7), and Section 5.11.2.2.6 of this Plan;

vi) access to the site will conform to Section 5.11.2.5.2;

vii) the application conforms to Section 6.2.3.3;”

This Report provides planning rationale in the context of the relevant Official Plan policy directives related to a new aggregate resource extraction operation in the Town. As well, rationale in the context of all technical reports prepared in connection with this proposal has been summarized where appropriate, in the context of policy directives from the Official Plan related to a new operation in Caledon.

b) The Applicant has completed a Traffic Impact Study as described by Section 5.11.2.4.14 which satisfactorily demonstrates that any additional traffic and road improvements will not have unacceptable impacts on the safe and efficient use of the road network and that impacts on adjacent land uses, on those landscape elements referred to in Section 5.11.2.5.2 (b) – (e) or on any environmentally sensitive features identified by the Traffic Impact Study will be satisfactorily mitigated;

The Transportation Impact Study and Haul Route Assessment demonstrates that the proposed haul route is an existing and identified haul route in the Town of Caledon Official Plan and that with the implementation of the recommendations, the proposed truck traffic from the CBM Pit / Quarry will not have unacceptable impacts on the safe and efficient use of the road network.

c) The Applicant has assessed the social impacts as described in Section 5.11.2.4.13 and demonstrated that the proposal will not have any unacceptable impacts;

A Socio-Economic Assessment has been prepared to evaluate the potential socio-economic effects of the proposed CBM Caledon Pit / Quarry. The report provides details and consideration of past public information sessions that have garnered some feedback from the community in the context of the proposal. The report also provides an overview of the existing socio-economic conditions within the Town, including population, demographics, employment, education and income statistics for the Town of Caledon. The report also provides an overview of technical reports prepared in connection with the proposal, including assessments related to visual impacts, noise impacts, air quality impacts, blasting impacts, and traffic impacts, and concludes that the design of the CBM Caledon Pit / Quarry will screen the active extraction area to maintain the open landscape character of the area, will minimize and mitigate impacts on surrounding land uses from a noise, blasting, and visual perspective. As well, the report concludes that the overall project will provide economic benefits at both the local and regional level.

d) The Applicant has completed all environmental investigations and studies as required by this Plan and by all relevant approval agencies and demonstrated that the proposal will not have any unacceptable impacts;

The Natural Environment Report, the Water Report Level 1/2 and the Maximum Predicted Water Table Report have provided a fulsome overview of all environmental investigations and studies which are of interest in connection with this proposal and have confirmed that the proposal will not have any unacceptable impacts.

e) The Applicant has completed a Visual Impact Report as described by Section 5.11.2.4.11 and demonstrated that the proposal will not have any unacceptable impacts;

The technical recommendations resulting from the Visual Impact Assessment include a requirement that berms shall be designed to mitigate visual effects and shall be constructed along the perimeter of each area (Main Area, North Area and South Area) as shown on the Site Plans. It is noted that the berms shall be 5 m in height and constructed with material from each extraction area, prior to extraction commencing. It is also noted that the berms shall remain in place throughout the operations phase in each of the Main Area, North Area and South Area until extraction has been completed and at that time, the berms shall be removed and the material from the berms shall be used for rehabilitation, as identified on the Site Plans, operation plans and rehabilitation plan. Site visibility will be predominately limited to the establishment of berm and tree screening features that will be successful at eliminating the visibility of the aggregate extraction activity. With implementation of the recommendations, the proposed operation has been designed to not result in any unacceptable visual impacts on surrounding land uses. Further, with the implementation of the proposed rehabilitation plan in the long term the Site will result in a visual enhancement compared to existing conditions. Specifically, the resulting natural

landscape will feature several lakes and a mosaic of woodlands, grasslands and wetlands that will complement and enhance the current agricultural aesthetic.

f) The applicant has completed a Cultural Heritage Survey as described by Section 5.11.2.4.12 and, where required, additional cultural heritage studies, such as a Cultural Heritage Impact Statement, or an archaeological assessment and has demonstrated that there will not be any unacceptable impacts;

A ‘Stage 1 and 2 Archaeological Assessment’ and a ‘Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment’ were both completed for the proposed CBM Caledon Pit / Quarry. Both reports conclude that with recommended mitigation and protection measures, there will not be any unacceptable impacts to the archaeological or cultural heritage resources on Site or on surrounding lands.

g) The Applicant, for operations which propose below water table extraction, has completed a Water Resources Study as described in Section 5.11.2.4.15 and has demonstrated water resources will be protected, maintained and, where applicable, enhanced and that there will be no unacceptable impacts;

A Water Report Level 1/2 and a Maximum Predicted Water Table Report have been completed for the proposal and these studies demonstrate that water resources will be protected, maintained and enhanced through rehabilitation, and that there will be no unacceptable impacts as a result of the operation.

h) The Applicant, for operations which propose above water table extraction, has completed a Water Resources Study as described in Section 5.11.2.4.16 and has demonstrated water resources will be protected, maintained and, where applicable, enhanced and that there will be no unacceptable impacts;

The proposal involves below water extraction, and as noted above, there will be no unacceptable impacts to water resources as a result of the operation.

i) The Applicant has demonstrated that noise and vibration impacts will be mitigated to acceptable levels;

The Noise Assessment Report completed in connection with the proposed CBM Caledon Pit / Quarry compared the predicted noise levels at the identified representative receptors to the established noise limits pursuant to MECP noise guidelines. The results indicate that, after the implementation of identified noise controls or equivalent measures, the noise levels predicted at the representative off-Site receptors are expected to be at or below the applicable noise limits. Accordingly, the Noise Impact Assessment concludes that the Site has been designed to minimize and mitigate to acceptable levels any potential adverse effects from noise and can operate in compliance with MECP and MNRF noise guidelines for all receptors with implementation of the recommendations for the design of the Site.

With the implementation of the recommendations contained in the Blast Impact Assessment, the Site will be operated in accordance with the current quarry blasting guidelines published by the MECP (NPC-119) at all surrounding sensitive land uses. All blasting and blast monitoring will occur in accordance with the Aggregate Resources Act (Ontario Ministry of Natural Resources and Forestry, 2017) prescribed conditions in order to ensure compliance with the provincial guidelines. As well, through proper blast design and diligence in inspecting the geology before every blast, flyrock will be maintained within the proposed quarry extraction limits.

j) The Applicant has demonstrated that the impacts from dust and other air pollutants will be mitigated to acceptable levels; and,

An Air Quality Impact Assessment was completed in connection with the proposal to characterize the existing air quality in the surrounding area, to estimate the emissions from the future Site operations, to predict the impact of the proposed Site operations on the local air quality through dispersion modelling and to recommend best management practices to help mitigate the potential for fugitive dust generation. The report concludes that the maximum off-Site predicted cumulative concentrations as a result of emissions from the Site are below the assessment criteria and further, with the implementation of the recommendations, concentrations of emissions from the Site are expected to be below the ambient air quality criteria at all surrounding sensitive land uses. As well, the Site has been designed to minimize and mitigate to acceptable levels any potential adverse effects from dust and other air pollutants in accordance with provincial guidelines, standards and procedures.

k) The Applicant has prepared a land use planning analysis and has demonstrated that the proposal will not result in any unacceptable land use conflicts.

The proposed application includes measures to minimize or address potential impacts on the natural environment, water resources, adjacent sensitive land uses, cultural heritage resources, transportation, surrounding agricultural and rural communities, visual, air quality, noise, and blasting based on the technical reports that have been completed. Air, noise, visual and blasting

studies were completed and these studies include recommended mitigation and monitoring requirements to ensure provincial regulations and standards are implemented to minimize impact on social and human health. The Site has been designed so operations are conducted in a manner which minimizes environmental impact in accordance with Provincial standards and the requirements of the Greenbelt Plan, the Region of Peel Official Plan and the Town of Caledon Official Plan. The applications also include a comprehensive rehabilitation and ecological enhancement plan for after use for the Site. This fulsome land use planning analysis has been set out in this Report and concludes with support for the proposed CBM Caledon Pit / Quarry.

“5.11.2.4.3 In considering whether to approve an application for an Official Plan Amendment to designate land in Aggregate Resource Lands for a new extraction operation or an expansion to existing extraction operation, the Town of Caledon will take into account whether the Applicant has demonstrated that:

a) The monitoring program proposed by the Applicant will be adequate. In considering this issue, the Town of Caledon will take into account whether the proposed program is acceptable to the Region of Peel, the Ministry of Natural Resources and Forestry, the Conservation Authorities and the Niagara Escarpment Commission. The Town of Caledon expects that the proposed monitoring program will include the requirement that the results of such a program will be delivered to the Town of Caledon, the Region of Peel, the Ministry of Natural Resources and Forestry, the Conservation Authorities and the Niagara Escarpment Commission where applicable, for the purpose of compiling a database in conformity with Section 5.11.2.9.2;

b) The proposed operational plan minimizes impacts on surrounding land uses and visual resources through, among other things, strategic phasing, direction of extraction, timing of phasing and location of permanent and temporary processing plants; and,

c) The rehabilitation proposed will be progressive and timely, will minimize the extent of the disturbed area and will conform to Section 5.11.2.8 of this Official Plan.

The proposed CBM Caledon Pit/Quarry has been designed taking into account the recommendations, mitigation measures and monitoring programs that have been developed by a multi-disciplinary project team. These include recommendations and monitoring related to water resources, ecology, acoustics, air quality, blasting, visual, and traffic. Ongoing monitoring will be conducted for these disciplines, including background monitoring which will be conducted to

establish baseline levels. Ongoing monitoring during extraction will be part of the operations plan for the proposed Pit/Quarry.

The proposed CBM Caledon Pit / Quarry is proposed to be operated in 7 phases. Phases 1, 2A, 3, 4, 5 are located to the northwest of the intersection of Regional Road 24 and 136 which is the Main Area. Operations would commence in the Main Area and Phase 1 would include the permanent processing area (crushing, screening and wash plant), aggregate recycling area and the entrance / exit for the quarry. Until such time as sufficient space is opened up to establish the permanent processing area, a temporary mobile crushing and processing plant is proposed to be used in Phase 1.

Phase 2B is located to the northeast of the intersection of Regional Road 24 and 136 in the North Area. Phase 6 and 7 are located to the southwest of the intersection of Regional Road 24 and 136 in the South Area (**Figure 4: Operations / Phasing Plan**). The proposed CBM Caledon Pit / Quarry involves stripping topsoil and overburden from the subject Site to create a perimeter berm and any excess soil will be temporarily stored in the northern portion of the Main Area or used for progressive rehabilitation of the site. The proposed Extraction Area includes extracting sand, gravel and bedrock resources below the water table and the Site will be dewatered to allow operations in a dry state. Following extraction of Phase 7, the permanent processing plant in Phase 1 will be removed and this will be the final area to be extracted and rehabilitated. The phasing of the proposed mineral aggregate operation has been designed to reach final extraction limits and depths within each phase so progressive rehabilitation of the side slopes can be completed.

The post-extraction rehabilitation plan has been designed to be progressive, to fit into the overall regional context and to complement the existing topography and terrestrial and aquatic features in the area. Approximately 6.3% of the Site is subject to the Town's approved Rehabilitation Master Plan (RMP). The portion of the Site that is subject to the RMP is located in the northwest portion of the Site, adjacent to Mississauga Road, and the RMP envisions this area as natural heritage and adjacent agriculture. The Final Rehabilitated Landform and Ecological Enhancement Areas Plan for the proposal plans for natural heritage and agriculture in this location and is consistent with the Town's approved RMP. As well, if the proposal is approved, CBM intends to create an upland forest and meadow grassland on the southern 36 hectares, south of the proposed licence area, and is exploring the potential of conveying them permanently to a public authority for long term protection.

“5.11.2.4.4 The Town of Caledon will consider an amendment to this Plan to redesignate lands for a new extraction operation or an expansion to an existing operation as extractive industrial purposes on lands identified as CHPMARA Aggregate Reserve Lands on Schedule L subject to Section 5.11.2.1.2 and subject to the following additional requirements:

a) The Applicant provide a statement describing its public consultation process used to introduce the proposal to the immediately surrounding community and to describe to the community the nature of impacts to be expected and the means proposed to mitigate those impacts to acceptable limits;

During 2020 and 2021 when a number of Public Information Sessions were convened, CBM was following the advice and direction provided by the provincial and regional Medical Officers of Health and undertook all public engagement in a virtual format. Attached as **Appendix E** is a Public Engagement Summary prepared by Golder Associates Ltd. summarizing the Indigenous consultation that has occurred to date, virtual PIC's that have occurred to date with the community, the Project Website which offers the public opportunity to check in on the project details and status, including a series of frequently asked questions (FAQs), and details the Project Email contacts for any questions members of the community may wish to ask outside of the PIC / Public Meeting formats.

As noted earlier, CBM is committed to engaging with the community and members of the public, as well as staff from agencies, the Town and members of Council throughout the planning and ARA processes, including convening informal public information centres, keeping the web site updated, and attending any formal Public Meetings that may be scheduled.

b) A Sub-watershed Study has been completed and appropriate policies are incorporated into this Plan and the application conforms thereto. Alternatively, the Applicant may undertake a comprehensive broader scale environmental study as described in Section 5.11.2.4.17 which is to be considered in conjunction with the EIS required in support of the pit or quarry;

A Natural Environment Report, Water Report Level 1/2 and Maximum Predicted Water Table Report have been completed in support of the proposal and each report presents a summary of existing conditions, an analysis of features and functions, an assessment of potential impacts and mitigation measures to be undertaken to ensure baseline conditions are protected or enhanced, or replaced through ecological rehabilitation, and a monitoring and adaptive management section outlining how features and functions should be monitored to ensure no net negative impacts as a result of the proposed extraction.

c) That a traffic and haul route evaluation has been completed that identifies and assesses the economic, social and physical impacts associated with future aggregate traffic to or from aggregate operations within the resource area, identifies the proposed haul route of least impact and assesses the acceptability of the impacts along the proposed haul route.

Provided the impacts are acceptable and taking into account the significance of the aggregate resource, the Town acknowledges that, in principle, there should be a haul route to each resource area. In determining the acceptability of impact pursuant to this subsection, the Town will take into account the category of the road as identified on Schedule J and associated transportation policies; and,

The Transportation Impact Study and Haul Route Assessment confirms a Site access is feasible on Charleston Sideroad which is a High Capacity Arterial and an existing and identified haul route. The report confirms that with the implementation of the recommendations, the proposed truck traffic from the CBM Pit / Quarry will not have unacceptable impacts on the safe and efficient use of the road network and that from an overall transportation perspective, the proximity of the Site to market will result in minimizing the length and number of vehicle trips required to transport an essential raw material needed for the construction and maintenance of communities.

d) That the application satisfies all other requirements of Sections 5.11.2.4.1, 5.11.2.4.2 and 5.11.2.4.3.

The proposal and applications satisfy all requirements set out in these policy sections of the Official Plan. These sections were discussed above.

“5.11.2.4.8 Prior to the submission of an application for a new aggregate extraction operation or expansion to an existing operation, the Town of Caledon will require a pre-submission consultation meeting with the Region of Peel, Ministry of Natural Resources and Forestry, Conservation Authorities, other relevant agencies and the Applicant to identify the detailed information to be provided in the reports required to support the application, to scope study requirements where appropriate, and to outline the process of evaluation and peer review.”

As noted above, a pre-consultation meeting was organized by the Town of Caledon with relevant agencies in February 2022 and CBM attended to present the proposal and discuss submission requirements. As a result, a formal checklist has been agreed to and Terms of Reference documents for certain studies were provided by CBM to the Town. All materials identified on the final DART checklist have been provided to the Town of Caledon in submission of a complete application and in accordance with this Section of the Town’s Official Plan.

“5.11.2.4.11 The Visual Impact Report required by Section 5.11.2.4.2(e) shall address the following:

a) Assess the significant views and how they might be affected by the proposed extractive operation;

b) Assess the changes to the natural landscape and the cultural landscape that would result from the operation; and

c) Identification of any required mitigation measures, and the visual character of such measures. This may include berms, entrance designs, vegetation, landscaping, and operational matters such as small phases, screening of equipment, direction of extraction which would seek to minimize visual impacts.

The Visual Impact Assessment has concluded that significant views and how they might be affected by the proposed Caledon Pit / Quarry have been considered, including the changes to the natural landscape and the cultural landscape. Mitigation measures such as berms, entrance designs, vegetation, landscaping and operational matters have been recommended to minimize visual impacts and with implementation of the recommendations, the proposed operation has been designed to not result in any unacceptable visual impacts on surrounding land uses. Site visibility will be predominately limited to the establishment of berm and tree screening features that will be successful at eliminating the visibility of the aggregate extraction activity. As well, with the implementation of the proposed rehabilitation plan in the long term, the Site will result in a visual enhancement compared to existing conditions. Specifically, the resulting natural landscape will feature several lakes and a mosaic of woodlands, grasslands and wetlands that will complement and enhance the current agricultural aesthetic.

‘5.11.2.4.12 a) The Cultural Heritage Survey as described by Section 5.11.2.4.2 (f) will be carried out in accordance with Section 3.3.3.1.4 of this Plan and, in the case of the traffic studies required by Sections 5.11.2.4.2 (b) and/or 5.11.2.4.4(c), shall include an evaluation of cultural heritage resources in so far as they relate to roads not identified pursuant to section 5.11.2.5.1. The level of cultural heritage resource investigation associated with these traffic studies will be survey level appropriate to the nature of the cultural heritage resources encountered and the nature of the anticipated impacts on these resources associated with the proposed haul route.

b) Cultural heritage resource conservation measures may include, as appropriate, retention and use or adaptive re-use of heritage buildings and structures, incorporation of cultural heritage elements such as fence lines and tree lines where possible, and carrying out appropriate salvage and recording of cultural heritage resources that may be removed as a result of aggregate extraction operations.”

As noted above, Heritage Impact Assessments (HIAs) are being undertaken for potential heritage attributes located on five listed (not designated) or inventoried heritage properties that are located within the proposed Caledon Pit/Quarry and contain cultural heritage potential. Until that is complete, a 50 m construction radius will be established for no site alteration. These potential heritage attributes will be conserved until an HIA is prepared. After the HIAs are prepared, evaluation of each property will be known and any site specific mitigation will be implemented.

“5.11.2.4.13 Any impact studies required by this Plan, will include, where appropriate, an assessment of social impacts based on predictable, measurable, significant, objective effects on people caused by factors such as noise, dust, traffic levels and vibration. Such studies will be based on Provincial standards, regulations and guidelines and will consider and identify methods of addressing the anticipated impacts in the area affected by the extractive operation.”

The Socio-Economic Assessment evaluates the potential socio-economic effects of the proposed CBM Caledon Pit / Quarry. The report provides an overview of technical reports prepared in connection with the proposal, including assessments related to visual impacts, noise impacts, air quality impacts, blasting impacts, and traffic impacts. The report concludes that the design of the CBM Caledon Pit / Quarry will screen the active extraction area to maintain the open landscape character of the area, will minimize and mitigate impacts on surrounding land uses from a noise, blasting, and visual perspective through the implementation of mitigation and monitoring to ensure provincial regulations and standards are implemented, to minimize impacts of social and human health. As well, the report concludes that the overall project will provide economic benefits at both the local and regional level.

“5.11.2.4.14 The Traffic Impact Study required by Section 5.11.2.4.2(b) shall provide the following information:

a) The proposed haul route(s) which may be necessary to service potential markets;

b) Land use, land use activities and the character of adjacent lands (including any significant environmentally sensitive features) along the

proposed haul route, including the identification of existing and permitted land uses that may be significantly affected by the proposed haul route. With respect to those roads identified in Section 5.11.2.5.1, this information will only be required for those lands in the immediate vicinity of the proposed pit or quarry;

c) An evaluation of alternative haul routes and the identification of the haul route(s) with the least impact;

d) The physical characteristics of the potential haul routes including road classification, load limits, surfacing and character (e.g. rural, scenic) and the identification of any physical constraints to heavy truck traffic, such as vertical or horizontal curves, sight lines or shoulders;

e) Anticipated increase in traffic generated by the proposed extractive operation, and any increase in background traffic;

f) Description of the proposed operation including the phasing where applicable, and resulting trip generation, distribution and vehicle composition;

g) The horizon year that will be used in determining future impacts;

h) Assumptions concerning passenger car equivalents;

i) Traffic impacts (both operational and physical) resulting from the truck traffic generated by the proposed operation, including impacts on road structure, traffic flow and safety and the mitigation measures required to address these impacts;

j) Whether improvement of the roads proposed to be used as a haul route(s) is necessary, the costs of such improvement, any anticipated impacts on significant environmental features affected by such improvement, and whether an Environmental Assessment is required for this improvement;

k) The status of the road in the Region of Peel and Town of Caledon Official Plans and whether the proposed use of the road as a haul route conforms to these planning documents; and,

l) Distance from the entrance of the proposed operation to the nearest haul route as defined in Section 5.11.2.5.1.”

The Transportation Impact Study and Haul Route Assessment provides a detailed evaluation of alternative haul routes and the identification of the haul route(s) with the least impact and concludes that an access on Charleston Sideroad to utilize a haul route location along Charleston Sideroad is most appropriate. The report examines the anticipated increases in traffic, operational and physical traffic impacts resulting from the proposal, recommends road improvements to accommodate the proposal, and confirms that the proposed haul route is an existing and identified haul route in the Town of Caledon Official Plan, with the implementation of the recommendations, the proposed truck traffic from the CBM Pit / Quarry will not have unacceptable impacts on the safe and efficient use of the road network, and from an overall transportation perspective, the proximity of the Site to market will result in minimizing the length and number of vehicle trips required to transport an essential raw material needed for the construction and maintenance of communities.

“5.11.2.4.15 The Water Resources Study required by Section 5.11.2.4.2(g) shall identify all sources of water and their functions and analyze and assess the impact of the application on each of those water resources and shall satisfactorily demonstrate that there will not be unacceptable impacts and shall address the following:

a) The quantity and quality of mineral aggregate resource located below the water table;

b) That the removal of the mineral aggregate resource and the subsequent rehabilitation of the lands will satisfy the applicable performance measures in Sections 3.2.5.13 and 5.11.2.2.6 of this Plan;

c) That measures to protect water resources will be implemented in the design and operation of fuel storage and handling systems, machinery storage and servicing and the use and storage of potential contaminants on the site. The storage of fuel and other potential contaminants on-site may be restricted if necessary to protect water resources; and,

d) That an appropriate monitoring program will be implemented and that the results of this monitoring program will be provided to the Town of Caledon, the Region of Peel, the Niagara Escarpment Commission where applicable and the applicable Conservation Authorities.

The Water Report Level 1/2 and the Maximum Predicted Water Table study prepared in connection with the proposed below water operation has identified all sources of water and their functions on Site and in the surrounding area and has provided an analysis to confirm that there will be no negative impact or unacceptable impacts on water resources as a result of the proposal. The report evaluates the quantity, quality and distribution of bedrock and sand and gravel aggregate resources on the Site, by means of a comprehensive borehole drilling and laboratory testing program and confirms that sand and gravel of significant thickness was found to be present in the South Area and in the western corner of the Main Area of the Site. The sand and gravel thickness is noted to increase from east to west, where it is in excess of 12 m thick in the western part of the Main and South Area. As well, the report estimates there is approximately 5 million tonnes of economic sand and gravel on the Site. As well, the report notes that the rock core quality test results were very favourable, as all samples tested from the 33 boreholes drilled on the Site met all of the required MTO specifications for concrete aggregate. It is confirmed that the Gasport Formation was found to be present in all boreholes drilled on the Site and there is approximately 80 million tones of economic dolostone on the Site.

The proposed operation and the proposed rehabilitation and ecological enhancement for the Site will protect and enhance the quality and quantity of groundwater recharge and discharge and the flow distribution of groundwater, and will not negatively impact the quality and quantity of groundwater aquifers.

As well the report addresses measures to protect water resources that will be implemented in the design and operation of fuel storage and handling systems, and machinery storage. An appropriate monitoring program will be implemented to ensure the protection of all water resources on Site and on surrounding lands.

“5.11.2.5 Aggregate Traffic

5.11.2.5.1 Haul routes for new aggregate operations shall only be located, except as provided for in Section 5.11.2.5.2, on the High Capacity Arterials as are identified on Schedule J to this Plan and on Charleston Sideroad, Old Church Road between Regional Road 7 and Regional Road 50 and King Street between Highway 10 and Regional Road 50. Use of other roads for haul routes by existing aggregate operations can continue.

5.11.2.5.2 Access to a new or expanded aggregate operation should be via an existing entrance onto a road identified in Section 5.11.2.5.1 either directly or through the use of an inter-pit road. Where this is not possible, access via a new entrance onto a road identified in Section 5.11.2.5.1 may be considered...

5.11.2.5.3 The identification of roads upon which haul routes shall be located in Section 5.11.2.5.1 shall be reviewed and updated as necessary by the Town of Caledon. As part of this review, the Town of Caledon will work with adjacent municipalities and the Region of Peel to minimize impacts from traffic from outside of the Town of Caledon.”

The proposed haul route will be utilizing Charleston Sideroad which is a High Capacity Arterial Road and an existing and identified haul route in Caledon. The proposed truck distribution includes 95% of truck traffic heading east on Charleston Sideroad towards Hurontario Street (with 90% travelling south and 5% travelling north on Hurontario Street) and the remaining 5% truck traffic heading west on Charleston Sideroad. Access has been proposed as a new access along Charleston Sideroad, approximately 600 metres east of Mississauga Road and 720 metres west of Regional Road 136, measured between curb extensions. This access was determined on the basis of a full analysis involving existing haul route restrictions, impact to existing residents, access spacing requirements, physical constraints, and safety considerations

5.11.2.6 Land Use Compatibility

5.11.2.6.1 For the purposes of this Plan, the area of influence shall be, for sand and gravel operations, a distance of 300 metres, and for quarries, a distance of 500 metres from either of:

- a) The limits of CHPMARA; or,*
- b) The extraction limit of the existing licenced operations.*

5.11.2.6.2 For the purposes of this Plan, sensitive land use shall mean buildings, amenity areas, or outdoor spaces where routine or normal activities occurring at reasonably expected times would experience one or more adverse effects from aggregate operations or major facilities. Adverse effects shall be as defined by the Provincial Policy Statement. Sensitive land uses may be part of the natural or built environment.”

The subject Site and surrounding area are mapped as HPMARA and CHPMARA pursuant to the Region and Town Official Plans, and existing operations exist in the area and new mineral aggregate operations are contemplated in this area, taking into account existing sensitive land uses. The Aggregate Resources Act requires an extraction setback of 30 metres from residential uses and the proposed extraction area includes setbacks that are greater than this separation distance. Detailed assessments related to noise, air and blasting have been completed and demonstrate that

the operation has been designed and buffered to meet provincial limits for noise, air and blasting at surrounding sensitive land uses. As well, the Hamlet of Cataract is located south of the Subject Site and land area consisting of approximately 36 ha between the Site's licence limit and the Hamlet limit is proposed to be enhanced with an upland forest and meadow grassland and CBM is exploring the potential of conveying these lands permanently to a public authority for long term protection.

5.11.2.7.2 The Town of Caledon will encourage and co-operate with the owners of existing licenced extractive operations to implement the following measures and will request the Ministry of Natural Resources and Forestry to include the following provisions in new or amended licences:

- a) Small phases to limit the amount of disturbed area at any one time and encourage early rehabilitation;*
- b) Strategic direction of extraction and placement of screens and buffers where operational areas may be visible to the public from adjacent roadways or from more distant view points;*
- c) Creation of variable berms and mature vegetative screens to replicate the natural topography of the area;*
- d) Utilization of offset entrances to screen the internal pit areas; and,*
- e) Sharing and/or co-ordination of entrances when two operations are adjacent to each other.*

The proposed CBM Caledon Pit / Quarry is proposed to be operated in 7 phases. Phases 1, 2A, 3, 4, 5 are located to the northwest of the intersection of Regional Road 24 and 136, in the Main Area. Phase 2B is located to the northeast of the intersection of Regional Road 24 and 136, in the North Area. Phase 6 and 7 are located to the southwest of the intersection of Regional Road 24 and 136, in the South Area (**Figure 4: Operations / Phasing Plan**). During extraction, berms will be installed and designed to mitigate visual effects, along the perimeter of each area. The berms are recommended to be a minimum of 5 m in height and will be constructed with materials from each extraction area, prior to extraction commencing. It is noted in the Visual Impact Assessment that the berms shall remain in place throughout the operations phase in each of the Main, North and South Areas until extraction has been completed. As each Phase progresses and the resource is extracted, each Phase will be progressively rehabilitated and the berms can be removed and the materials from the berms can be used for rehabilitation.

5.11.2.7.4 *The Town of Caledon will encourage the construction of inter-pit road systems between extractive operations to lessen the impact of aggregate traffic on the road system, local residents and sensitive land uses. Where new licences or expansions to existing licences are being sought, the use of shared or common entrances will be required where appropriate and possible.*

The entrance / exit for the CBM Caledon Pit / Quarry is proposed to be located onto Regional Road 24, approximately 720 m west of Regional Road 136. The entrance / exit is proposed to be controlled by a new traffic light and the installation of taper lanes and acceleration lanes on Regional Road 24 at CBM's expense. The primary haul route for the proposed CBM Caledon Pit / Quarry is trucks will travel eastward on Regional Road 24 and then onto Highway 10. The proposed haul route is an existing aggregate haul route and is designated as an aggregate haul route in the Town of Caledon Official Plan.

Access to the North Area for aggregate extraction is anticipated approximately 10 years after the start of the operations in the Main Area. There will be no processing in the North Area and aggregate extracted from the North Area is proposed to be transported to the Main Area through a proposed tunnel underneath Regional Road 136, or a truck crossing. Access to the South Area is anticipated approximately 30 years after the start of the operations in the Main Area. In the South Area, CBM is proposing to permit a portable processing plant and the aggregate extracted and /or processed from the South Area is proposed to be transported to the Main Area through a proposed tunnel underneath Regional Road 24 or a truck crossing.

5.11.2.7.6 *The Town of Caledon will request the Ministry of Natural Resources and Forestry to require that all extraction and processing and associated activities be located, designed and operated so as to minimize environmental and social impacts and ensure no negative impacts on the Regional Greenlands system, the Environmental Protection Area designations and ground and surface water quantity and quality.*

The aggregate industry is among the most highly regulated in Ontario, to ensure the protection of people and the natural environment. The technical Natural Environment Report and Water Report Level 1/2 have confirmed that there will be no negative impacts on the Regional Greenlands System, the Town's Environmental Protection Area, or on ground water and surface water quantity and quality, and that the design will actually protect and enhance key natural heritage features and key hydrologic features and functions and water resources in the area. Other technical reports prepared in connection with this proposal confirm that the design of the CBM Caledon Pit / Quarry will screen the active extraction area to maintain the open landscape character of the area, will minimize and mitigate impacts on surrounding agricultural lands and operations, and will

minimize any potential impacts on surrounding land uses from a cultural, noise, blasting, air quality and visual perspective.

“5.11.2.8 *Rehabilitation Policies*

5.11.2.8.3 *Where Rehabilitation Master Plans have been endorsed by Council, all subsequent applications for new or expanded extractive operations shall be required to prepare detailed site rehabilitation plans that meet the intent of the Rehabilitation Master Plan for the area unless, in the circumstances, it is demonstrated to be inappropriate, and the requirements of the Aggregate Resources Act. Where no Rehabilitation Master Plan has been endorsed by Council, in addition to the detailed rehabilitation plans required under the Aggregate Resources Act, the Applicant shall illustrate how the rehabilitation of the subject property will be co-ordinated with the surrounding land uses”*

The Town of Caledon has an approved Rehabilitation Master Plan (RMP) (Plan dated March 2021; approved by Council March 2022) which presents a vision for the lands in the surrounding area to the proposed CBM Caledon Pit / Quarry. The RMP considers sensitive views, cultural heritage landscapes and surrounding land uses, generally focus on restoration and enhancement of the agricultural, rural and ecological resources characterizing a particular resource area and reflects the Specific Aggregate Resource Area Policies identified in the Town’s Official Plan. Approximately 6.3% of the Site is subject to the Town’s approved Rehabilitation Master Plan (RMP). The portion of the Site that is subject to the RMP is located in the northwest portion of the Site, adjacent to Mississauga Road, and the RMP envisions this area as natural heritage and adjacent agriculture. The Final Rehabilitated Landform and Ecological Enhancement Areas Plan for the proposal plans for natural heritage and agriculture in this location and is consistent with the Town’s approved RMP.

Figure 9: Rehabilitated Landform and Ecological Enhancement Areas illustrates the proposed rehabilitation plan for the entire Site.

“5.11.2.8.4 *The proposed rehabilitation scheme for a new or expanded aggregate operation shall conform to the policies of this Plan, including the protection and maintenance and, where appropriate, the enhancement and restoration of ecosystem integrity, in accordance with the Ecosystem Objectives contained in Section 3.2.2 and the Performance Measures contained in Sections 3.2.5 and 5.11.2.2.6.*

5.11.2.8.5 *The Town of Caledon will promote and encourage rehabilitation of aggregate operations in a manner which has regard for cultural and heritage resources in or adjacent to the site, including the conservation of significant cultural or heritage features where practical.”*

CBM’s proposed Rehabilitated Landform and Ecological Enhancement Areas (**Figure 9**) includes protection and enhancement of features and functions for ecology and water resources and also has regard for the phasing proposed for the operation and consideration for cultural heritage resources in the area.

5.11.2.9.10 *For the purpose of interpreting Sections 3.2 and 5.7, in the context of mineral aggregate operations, the terms "protect" and "maintain" shall be interpreted to allow a consideration of change to ecological functions and attributes, subject to a demonstration of no negative impacts, as defined in Section 5.11.2.9.11.*

5.11.2.9.11 *For the purpose of interpreting Sections 3.2, 5.7 and 5.11.2.2.6, in the context of considering applications for new or expanded mineral aggregate operations, "negative impacts" shall mean:*

a) Any loss of area of Core Area of the Greenlands System in Peel. Any loss of area of Environmental Policy Area, except as otherwise permitted by this Plan;

b) Any loss of significant ecological functions or attributes within a Core Area of the Greenlands System in Peel or Environmental Policy Area; and,

c) Allows a consideration of change to ecological functions and attributes within a Core Area of the Greenlands System in Peel or Environmental Policy Area, subject to subsections a) to b).

As confirmed in the Natural Environment Report, there will be no loss of Core Areas of the Greenlands, since there are no Core Areas of the Greenlands on site. Further, the Core Areas of the Greenlands which exist off Site (consisting of woodland B to the north and woodlands D and E to the east/southeast) will be protected from development with a minimum setback of 15 m to the extraction limit and a VPZ of 10 m will be provided. Further, there will be no loss of “Environmental Policy Area” on Site; rather, this area will be redefined to more accurately depict the Tributary #1 feature and will provide for a formal 10 m VPZ and related buffer setback to extraction. Accordingly, it is confirmed that the proposed CBM Caledon Pit/ Quarry demonstrates there will be no net negative impact on features or functions as a result of the proposed extraction.

“5.11.2.10.6 The Town of Caledon will, in particular, encourage progressive rehabilitation in Resource Areas Resource Areas 5 and 6.

5.11.2.10.7 Resource Areas 5 and 6 will be given first priority for the preparation of Rehabilitation Master Plans.”

The CBM Caledon Pit /Quarry is proposed to be progressively rehabilitated and the western portion of the Site within the approved RMP is consistent with the Town’s approved RMP.

The proposed Official Plan Amendment to establish the CBM Caledon Pit/Quarry on the Subject Site does not adversely affect, and is in conformity with, the purpose and objectives of the Town of Caledon Official Plan as it relates to policy directives for mineral aggregate resources and operations, including protection of the natural environment, water resources, cultural heritage features, agricultural areas, and minimizing potential impacts from noise, air quality, visual, blasting, and traffic.

9.7 Town of Caledon Zoning By-Law No 2006-50

The Town of Caledon Zoning By-law No. 2006-50 currently zones the Subject Site “A1” (Agricultural) and “EPA2” (Environmental Policy Area 2) (**Figure 21: Excerpt from Town Zoning By-Law**). The proposed CBM Caledon Pit / Quarry requires an amendment to the Town’s Zoning By-Law to implement the proposed Official Plan Amendment and to facilitate the development of the proposed Pit / Quarry. The proposed Draft Implementing Zoning By-Law has been included in **Appendix C** to this Report.

The Draft Implementing Zoning By-law seeks “MX-YY” (Extractive Industrial – Special) and “EPA1-487” (Environmental Policy Area 1 - 487) for the Main Area, and “MX-YY” (Extractive Industrial – Special) for both the North Area and South Area of the Subject Site. The “EPA1-487” (Environmental Policy Area 1 - 487) zone proposed for the Main Area is intended to be a refinement of the existing “EPA2” zone which is in the northwest corner of the Main Area. This proposed “EPA1-487” zone is intended to reflect the more accurate limits of the Tributary #1 feature, as well as the 10 m VPZ and associated setback buffer area. The “EPA1-487” zone permits lands to be licenced under the Aggregate Resources Act, but not extracted. This is consistent with these “EPA1-487” lands being located within the licence limit, but outside of the extraction area.

As well, as it relates to the proposed “MX-YY” zoning for the balance of the Site, in addition to seeking general land use permission for the proposed pit and quarry use, accessory open storage and a farm use which are principal uses permitted under the parent ‘MX’ zone, the proposal seeks special exception permission to allow permission for drilling/ blasting/ extraction, processing and shipping of aggregate, Site preparation with respect to stripping, berm creation and progressive rehabilitation through the special exception being sought. As well, special Site relief is required

from the parent ‘MX’ zone to confirm the definition of a ‘lot’ for the purposes of this site specific Zoning By-Law. Specifically, for the purposes of this By-Law, the contiguous parcels of land/lots within each of the Main Area, North Area and South Area respectively shall be considered consolidated as one lot, and the internal lot lines of the original lots shall not be construed to be lot lines for the purposes of any zoning regulations. Lastly, in order to facilitate a larger overall maximum GFA for the proposed buildings on site, site specific relief is proposed from the current MX zone permission of maximum 900 sq.m. to a proposed overall maximum GFA of 2,050 sq.m. amongst the four proposed buildings. There is no other specific relief being sought through this Zoning By-Law Amendment.

The proposed “MX-YY” and “EPA1-487” zones for the Subject Site will implement the proposed Official Plan Amendment for the Site which will provide access to an important mineral aggregate resource which is an essential raw material that is needed for the construction and maintenance of communities, and which will be made be available from a location that is close to the consumer.

Based on the analysis presented throughout this Report, the proposed Official Plan Amendment and related Zoning By-law Amendment align with and implement the objectives and policy directives of the PPS, Greenbelt Plan, Region of Peel Official Plan, and Town of Caledon Official Plan.

10.0 SUMMARY AND CONCLUSIONS

This Planning Justification Report and Aggregate Resources Summary Statement has been prepared to address provincial, regional and Town of Caledon policy through a number of technical reports and the following is a summary:

- The Subject Site is mapped as HPMARA in the Region of Peel Official Plan and CHPMARA in the Town’s Official Plan, which represents an area of primary significance for sand and gravel and bedrock resources and is protected and prioritized for potential future extraction.
- The Site includes approximately 80 million tonnes of high-quality dolostone bedrock resource and approximately 5 million tonnes of high-quality sand and gravel resource.
- The Site and surrounding lands are located within a rural area within the Town of Caledon. Surrounding land uses include a mix of agricultural, rural residential, existing licenced pits, Hamlet of Cataract, natural heritage areas including the Credit River, a golf course, the Charles Sauriol Conservation Area, and rural roads.

- The Site is located close to the GTA market and will result in minimizing the length and number of vehicle trips required to transport an essential raw material needed for the construction and maintenance of communities, thereby minimizing overall social, economic and environmental impacts.
- For Ontario and Caledon to meet their climate targets, there will be a need to significantly reduce GHG emissions from the transportation sector, which is the leading source of emissions in the province. Close-to-market aggregate production from quarries such as the one proposed in Caledon can cost-effectively reduce emissions from transportation.
- The proposed haul route is an existing and identified haul route in the Town of Caledon Official Plan. The Transportation Impact Study and Haul Route Assessment has demonstrated that with the implementation of the recommendations, the proposed truck traffic from the CBM Pit / Quarry will not have unacceptable impacts on the safe and efficient use of the road network.
- The proposed Site access is located along Charleston Sideroad in between Mississauga Road and Main Street and has been determined to be the most appropriate access location from a haul route, access spacing and impact to existing residents' perspective. A traffic signal warrant is not specifically satisfied in this location however, it is recommended to improve the operation of the intersection by providing suitable gaps for trucks to enter and exit the Site and accelerate safely without posing risk to other vehicles using Charleston Sideroad. It is noted that if the Region desires a signalized Site access, the installation of the signal can be implemented at CBM's expense.
- As part of the application, CBM is prepared to explore opportunity to convey approximately 36 ha along the southern limit of the Site (north of Cataract) permanently to a public authority for long term protection.
- The Subject Site includes an area in the northwest corner of the Main Area that is currently, and is proposed to continue to be, designated "Environmental Policy Area" in the Town's Official Plan and this area is not included in the proposed extraction area and will be protected from negative impacts. The proposed Official Plan Amendment and implementing Zoning By-Law define the limits of the "Environmental Policy Area" designation and "EPA1-487" (Environmental Policy Area 1 -487) zone on Site but outside of the extraction boundary to ensure the protection of the feature and the related VPZ in the northwest portion of the Site. The balance of the Site is proposed to be designated "Extractive Industrial" and zoned "MX-YY" (Extractive Industrial – Special Section) to facilitate the proposed pit/quarry.

- With the implementation of the recommended mitigation measures, the proposed Caledon Pit/Quarry operation will have minimal effect on surrounding agricultural operations. The proposed pit /quarry will utilize existing haul routes minimizing potential traffic related impacts. It is expected that noise, vibration, and dust will be kept at provincial standard. It is also expected that there will be no impacts to surrounding wells, including farm wells. Groundwater monitoring will occur and if a farm wells are affected, there are mitigation measures in place to quickly restore an adequate water supply to farming operation(s).
- Licencing of the proposed Caledon Quarry will be consistent with the agricultural-related policies provided in provincial, regional and local planning documents regarding mineral extraction in prime agricultural areas.
- The proposed application has been subject to a Stage 1/2 Archaeological Assessment and significant archaeological resources have been conserved. There are areas of the Site that require additional archaeological assessment and these areas have been identified on the Site Plans and no site alteration or development is permitted until these sites are cleared of archaeological potential.
- The proposed application has been subject to a Cultural Heritage Report and the majority of the Site does not include significant built heritage resources and significant cultural heritage landscapes. Portions of five listed (not designated) or inventoried heritage properties are located within the Site and may contain heritage potential. Accordingly, these areas require additional cultural heritage assessment and these areas have been identified on the Site Plans and no site alteration or development is permitted until additional assessment is completed and the recommendations of the additional study are implemented. As a result, significant built heritage resources and significant cultural heritage resources are conserved.
- The Visual Impact Assessment has assessed the significant views and how they might be affected by the proposed extractive operation, including the anticipated changes to the natural landscape and the cultural landscape that would result from the operation. The visual assessment identifies required mitigation measures such as berms, entrance designs, vegetation, landscaping and operational matters, and with implementation of the recommendations, the Site has been designed to not result in any unacceptable visual impacts on surrounding land uses. Site visibility will be predominately limited to the establishment of berm and tree screening features that will be successful at eliminating the visibility of the aggregate extraction activity. With the implementation of the proposed rehabilitation plan in the long term, the Site will result in a visual enhancement compared to existing conditions. Specifically, the resulting natural landscape will feature several lakes and a mosaic of woodlands, grasslands and wetlands that will complement and enhance the current agricultural aesthetic.

- An Air Quality Impact Assessment was completed and confirms that the maximum off-Site predicted cumulative concentrations as a result of emissions from the Site are below the assessment criteria. It is noted that with the implementation of the recommendations including the site's Best Management Practices, concentrations of emissions from the Site are expected to be below the ambient air quality criteria at all surrounding sensitive land uses. As well, the Site has been designed to minimize and mitigate to acceptable levels any potential adverse effects from dust and other air pollutants in accordance with provincial guidelines, standards and procedures.
- A Noise Assessment Report has been completed and confirms that after the implementation of identified noise controls or equivalent measures, the Site will operate in accordance with applicable noise limits as outlined in NPC 300 at all surrounding sensitive land uses. As well, it is confirmed that the Site has been designed to minimize and mitigate to acceptable levels any potential adverse effects from noise in accordance with provincial guidelines, standards and procedures.
- A Blast Impact Assessment was completed and it was confirmed that with the implementation of the recommendations contained in the report, the Site will be operated in accordance with the current quarry blasting guidelines published by the MECP (NPC-119) at all surrounding sensitive land uses. It is also confirmed that the Site has been designed to minimize and mitigate to acceptable levels any potential adverse effects from blasting in accordance with provincial guidelines, standards and procedures.
- The Blast Impact Assessment confirms that all blasting and blast monitoring would occur in accordance with the Aggregate Resources Act (Ontario Ministry of Natural Resources and Forestry, 2017) prescribed conditions in order to ensure compliance with the provincial guidelines and through proper blast design and diligence in inspecting the geology before every blast, flyrock will be maintained within the proposed quarry extraction limits.
- The Site does not contain any Core Areas of the Region of Peel Greenlands System, and the proposed extraction area does not include provincially significant wetlands, fish habitat, life science areas of natural and scientific interest (ANSI), earth science ANSI, significant valleylands, significant wildlife habitat, significant woodlands, sand barrens, savannahs, tallgrass prairie or alvars.
- A portion of the Main Area and North Area is part of the Greenbelt "Natural Heritage System". These areas do not include significant woodlands or habitat of endangered and threatened species habitat and therefore mineral aggregate operations are a permitted use. The rehabilitation plan for these areas has been designed to significantly enhance the Greenbelt Natural Heritage System compared to existing conditions.

- The proposed extraction area includes the removal of 6.3 ha of habitat for endangered species habitat for bats. This habitat is located outside of the Greenbelt Plan Natural Heritage System and development will be completed in accordance with provincial requirements. As well, through rehabilitation, equal to or more than this area of bat habitat will be developed. As a result, the application will result in an overall benefit for bat habitat.
- The proposed extraction area results in the removal of 15.8 ha of habitat for threatened species habitat for bobolink and eastern meadowlark. This habitat is located outside of the Greenbelt Plan Natural Heritage System and development will be completed in accordance with provincial requirements. As a result, the application will result in an overall benefit for bobolink and eastern meadowlark habitat.
- The proposed CBM Caledon Pit / Quarry results in the removal of 18.9 ha of non-significant woodland areas and 67.7 ha of woodland area will be created through off Site ecological enhancement and the rehabilitation plan on Site. Of this, 52.2 ha of woodland areas will be created within the licence area as part of visual screening and rehabilitation plan. 5.0 ha of this will be planted within the first year of the licence being issued. Outside of the licence area, a 15.5 ha woodland will be created within five years of the licence being issued. Taking into consideration the proposed off-Site ecological enhancement plan and the rehabilitation plan, woodland areas will be increased by a 3.6 to 1 ratio (67.7 ha to be created and 18.9 ha to be removed);
- The proposed CBM Caledon Pit / Quarry results in the removal of 0.1 ha of non-significant wetland areas and the proposed rehabilitation plan will create 4.8 ha of wetland area. As a result, wetland areas on Site will be increased by a 48:1 ratio.
- In total the application results in the removal of 22.2 ha of key natural heritage features (i.e. non-significant wetland and habitat of endangered and threatened species) that are permitted to be removed in accordance with applicable policies. Taking into account the proposed rehabilitation plan and the off-Site ecological enhancement plan, the application results in the creation of 100.4 ha of new key natural heritage features (i.e. meadow, wetland, woodland) and 158.3 ha of new key hydrologic features (i.e. lake) that is also considered fish habitat, which is a key natural heritage feature.
- The proposed Caledon Pit / Quarry is within the Credit Valley Source Protection Area but is not located in a wellhead protection area (WHPA) or an intake protection zone (IPZ) and there will be no impacts to municipal water supplies.

- Of the approximately 100 water supply wells evaluated in the Water Report Level 1/2 and Maximum Predicted Water Table Report, a majority of the wells are located at a depth below the proposed quarry floor and they will not be impacted. There are 15 residential wells that have the potential to be impacted during operations by the proposed pit / quarry development. These 15 wells are susceptible to water quantity impacts due to their location relative to the predicted zone of influence of the Site, and their relatively shallow well construction in comparison to other wells in the area. In all cases, these wells could be deepened to the depth of other wells in the surrounding area to restore the water supply. In the event of a water well complaint there is an established procedure that the licensee must follow which requires an immediate investigation and supply of temporary water if required. If any well was impacted by the proposed pit / quarry operation it is the licensee's responsibility to restore the water supply, at their expense. As part of the operation there will be an extensive on-Site and off-Site groundwater monitoring program and annual reports that will be submitted to the government agencies and publicly available. As a result of the proposed design of the quarry, the comprehensive groundwater monitoring and reporting requirements and the water well complaint procedure, it is concluded that water supply wells in the surrounding area will be protected.
- The proposed extraction area does not contain any identified water resources on the Region of Peel Schedule A-1 (Water Resources, Systems and Features). The proposed licence area includes an identified feature in the northwest corner of the Main Area and this feature is located outside of the extraction area and will be protected.
- A small portion of Main Area, a very small portion of the North Area and the majority of the South Area is mapped as a Highly Vulnerable Aquifer on the Region of Peel Schedule A-2 (Highly Vulnerable Aquifers). This is very common for mineral aggregate resource areas, and based on the design of the operation, and the implementation of the recommendations contained the Water Report Level 1/2 and the Maximum Predicted Water Table Report, the proposed Caledon Pit / Quarry does not result in additional risk to the aquifer.
- Almost all of the Rural Area in the Region of Peel including the Main Area, North Area and South Area are mapped as a Significant Groundwater Recharge Area on the Region of Peel Schedule A-3 (Significant Groundwater Recharge Area). This is very common for mineral aggregate resource areas, and based on the design of the operation, and the implementation of the recommendations contained in the Water Report Level 1/2 and the Maximum Precited Water Table Report, the groundwater recharge function of the area will be maintained.

- There are no key hydrologic features located within the proposed extraction area. There is a 0.1 ha key hydrologic feature (i.e., wetland) that will be impacted for the construction of the proposed berm and this feature is permitted to be removed in accordance with applicable policies. There are also key hydrologic features (i.e., wetland and tributary) in the northwest corner of the Main Area and these features will be protected. Taking into consideration the rehabilitation plan, there are 4.8 ha of wetland to be created and 158.3 ha lake to be created resulting in 163.1 ha of new key hydrologic features.
- The application includes a detailed monitoring and reporting requirements to ensure ongoing verification that adjacent sensitive groundwater features and sensitive surface water features will be protected, improved or restored.
- With the implementation of the recommendations in this report, sensitive surface water features and sensitive groundwater features will be protected, improved and restored during operations.
- Taking into account rehabilitation, there will be a long term enhancement to the water resources system and features.
- The proposed application has been subject to a Socio-Economic Assessment which has assessed social impacts based on predictable, measurable, significant, objective effects on people caused by factors such as noise, dust, traffic levels and vibration in accordance with the Town of Caledon Official Plan. With the implementation of the recommendations from the various technical reports noise, dust, traffic and vibration levels will be mitigated to minimize impacts and ensure there will not be any unacceptable impacts on the community.
- The proposed CBM Caledon Pit / Quarry will directly result in significant economic benefits at the regional and local level taking into account the proposed jobs that will be generated, the increase in property taxes for the Town of Caledon and Region of Peel and School Boards, and the increase in revenue the Town and Region will receive from the annual aggregate licencing fees. Indirectly, the Region and Town's economy will also benefit due to the proximity of the Site to the consumer which results in reduced cost for transporting an essential raw material that is needed for the construction and maintenance of communities.
- Approximately 6.3% of the Site is subject to the Town's approved Rehabilitation Master Plan (RMP). The portion of the Site that is subject to the RMP is located in the northwest portion of the Site, adjacent to Mississauga Road, and the RMP envisions this area as natural heritage and adjacent agriculture. The Final Rehabilitated Landform and Ecological Enhancement Areas Plan for the proposal plans for natural heritage and agriculture in this location, and is consistent with the Town's approved RMP.

- Approximately 93.7% of the Site is not subject to the Town's approved Rehabilitation Master Plan (RMP). The proposed rehabilitation plan envisions natural heritage ecological enhancements, including lakes, wetlands, woodlands, grasslands and meadows, and therefore the Plan is generally consistent with the vision for surrounding lands presented in the RMP.

Overall, the proposed CBM Caledon Pit / Quarry represents good planning, wise resource management and has been sited and designed to address the requirements of the Aggregate Resources Act Provincial Standards, be consistent with the Provincial Policy Statement, and conform to the Growth Plan for the Greater Golden Horseshoe, Greenbelt Plan, Region of Peel Official Plan and Town of Caledon Official Plan.

Respectfully Submitted and Prepared by:

Glen Schnarr & Associates Inc.



Karen Bennett, MCIP, RPP
Partner

Reviewed By:

MHBC



Brian Zeman, BES, MCIP, RPP
President

FIGURES

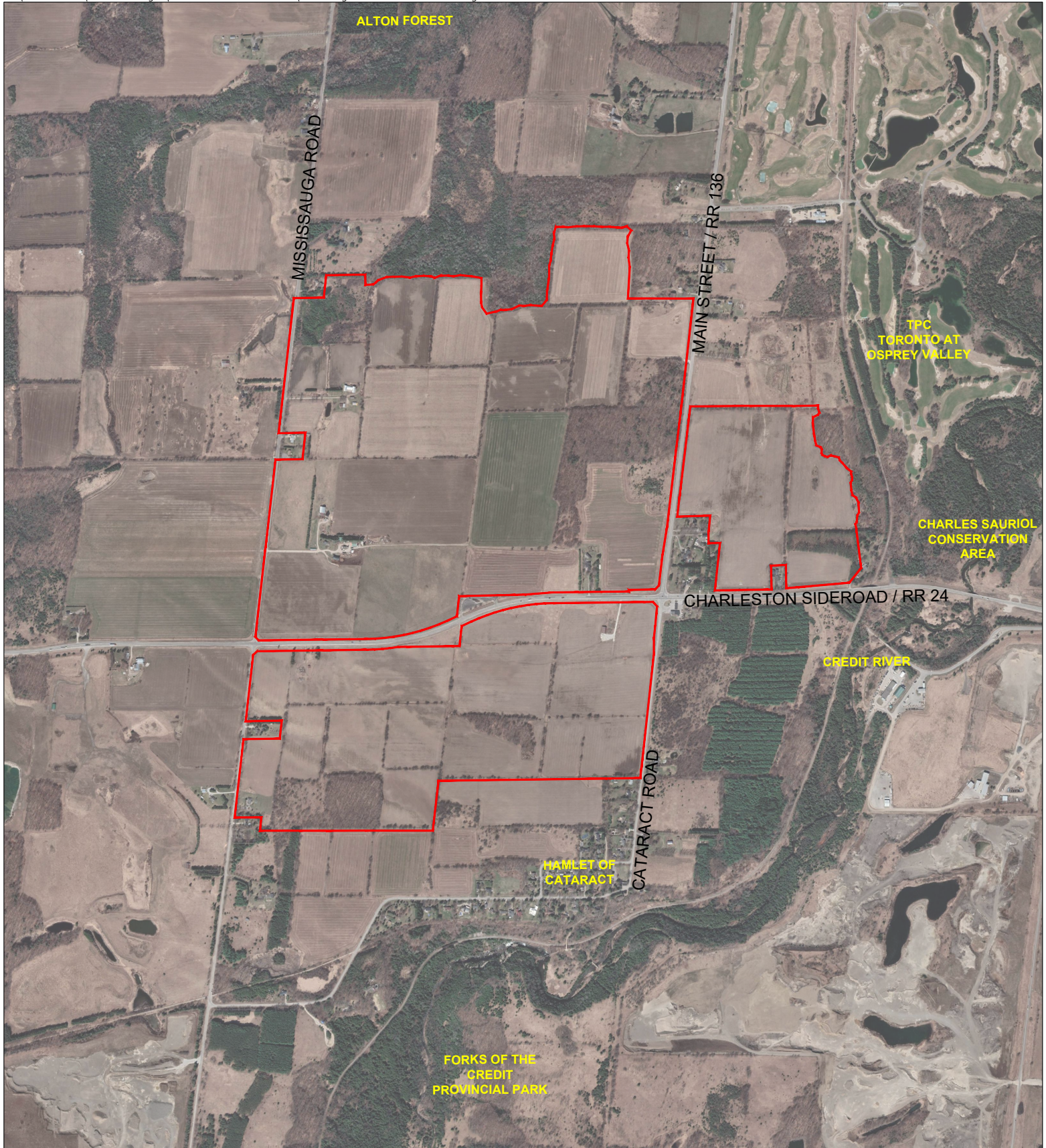


FIGURE 1
LOCATION PLAN OF SUBJECT SITE

PART OF LOTS 15-18, CONC. 4, WSCR AND
 PART OF LOT 16, CONC. 3, WSCR (FORMER
 GEOGRAPHIC TOWNSHIP OF CALEDON),
 TOWN OF CALEDON, REGION OF PEEL

LEGEND

 Subject Site - 262 ha (647.4ac)



Scale: N.T.S.
 DECEMBER 12, 2022

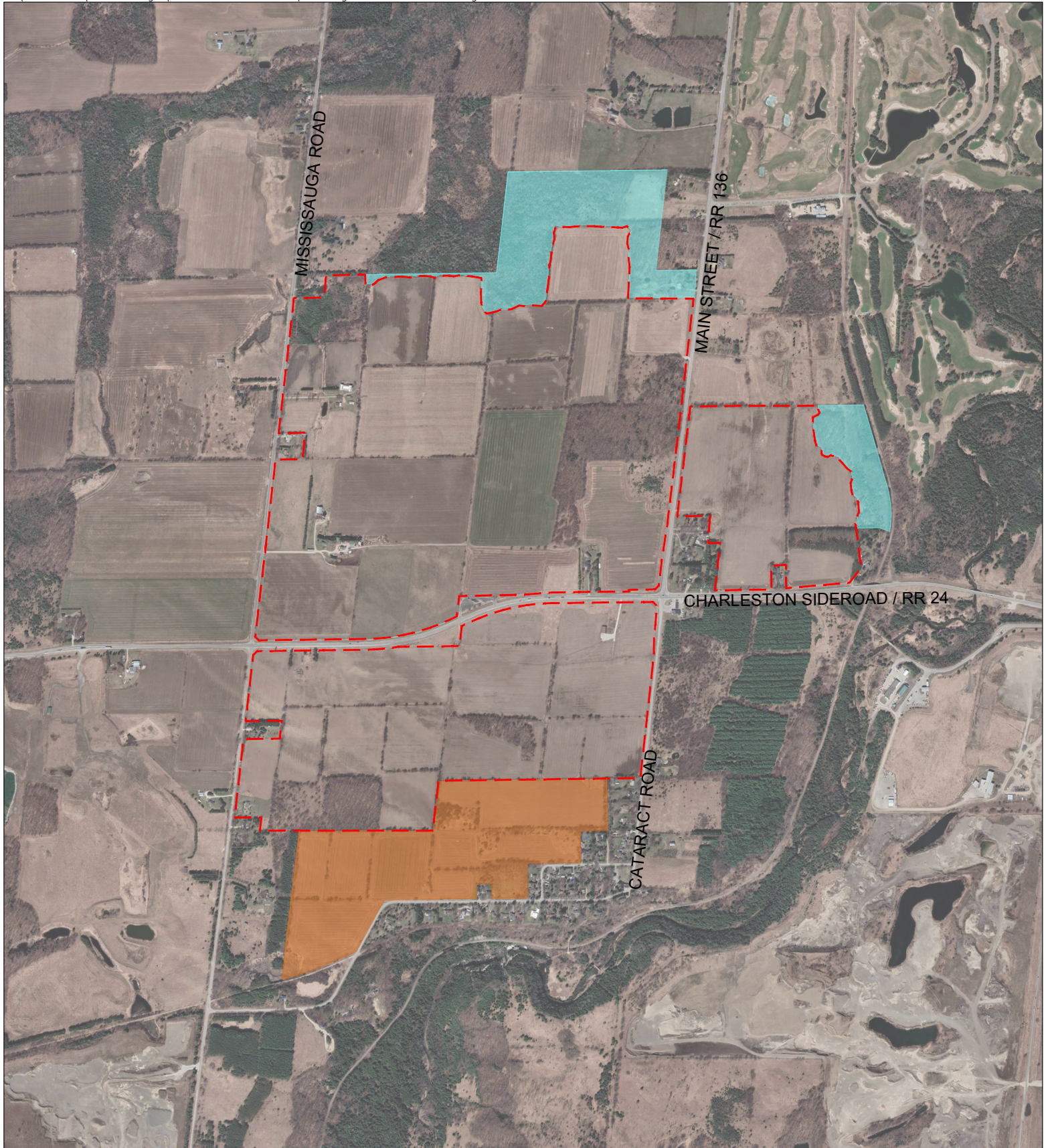





FIGURE 2
CBM ADDITIONAL LANDS

PART OF LOTS 15-18, CONC. 4, WSCR AND PART OF LOT 16, CONC. 3, WSCR (FORMER GEOGRAPHIC TOWNSHIP OF CALEDON), TOWN OF CALEDON, REGION OF PEEL

LEGEND

-  Subject Site - 262 ha (647.4ac)
-  Additional Lands Owned / Controlled by CBM - 25 ha (63ac)
-  Additional Lands Owned / Controlled by CBM Within Niagara Escarpment Plan - 36 ha (88ac)

Total Area Owned / Controlled by CBM: 323 ha (798ac)



Scale: N.T.S.
 DECEMBER 12, 2022

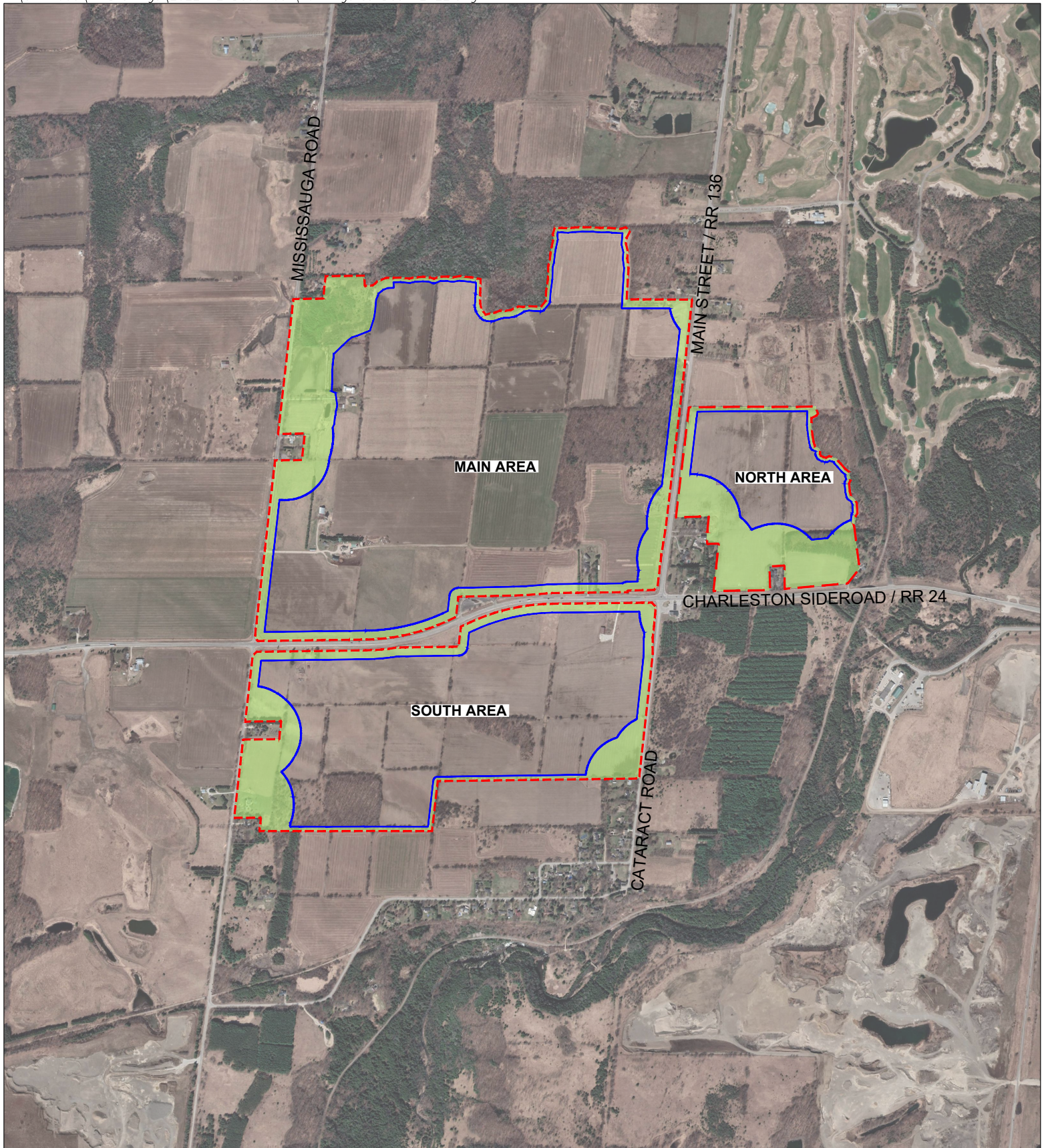


FIGURE 3
PROPOSED EXTRACTION AREA

PART OF LOTS 15-18, CONC. 4, WSCR AND PART OF LOT 16, CONC. 3, WSCR (FORMER GEOGRAPHIC TOWNSHIP OF CALEDON), TOWN OF CALEDON, REGION OF PEEL

LEGEND

- Subject Site - 262 ha (647.4ac)
- Proposed Extraction Area - 204 ha (504.1ac)
- Setback / Buffer Lands - 58 ha (143.3ac)



Scale: N.T.S.
 DECEMBER 12, 2022

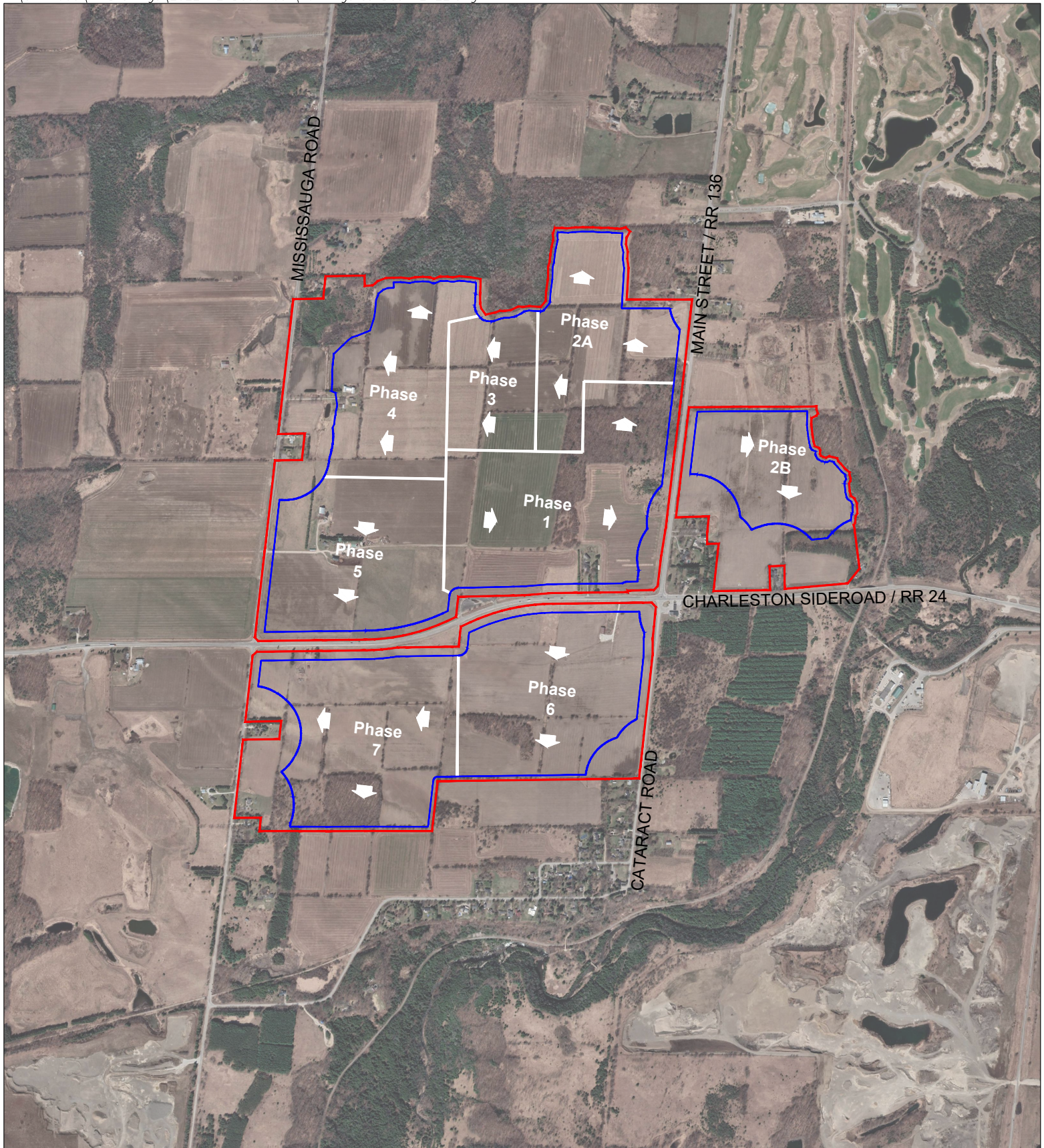




FIGURE 4
OPERATIONS / PHASING PLAN

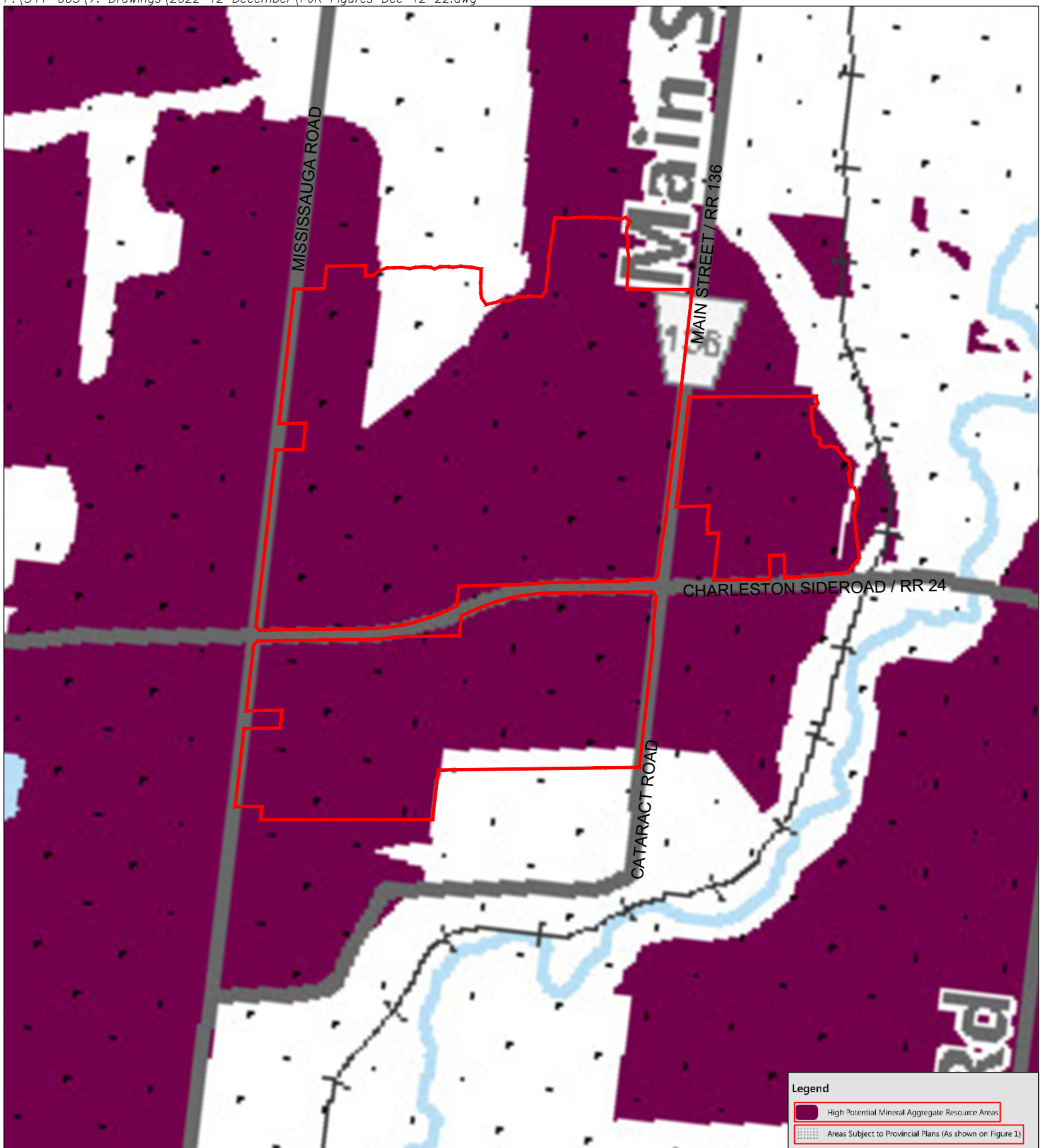
PART OF LOTS 15-18, CONC. 4, WSCR AND PART OF LOT 16, CONC. 3, WSCR (FORMER GEOGRAPHIC TOWNSHIP OF CALEDON), TOWN OF CALEDON, REGION OF PEEL

LEGEND

-  Subject Site - 262 ha (647.4ac)
-  Proposed Extraction Area - 204 ha (504.1ac)



Scale: N.T.S.
DECEMBER 12, 2022



Legend

- High Potential Mineral Aggregate Resource Areas
- Areas Subject to Provincial Plans (As shown on Figure 1)

FIGURE 5
EXCERPT FROM REGION OF PEEL OFFICIAL PLAN - SCHEDULE D-2: HIGH POTENTIAL MINERAL AGGREGATE RESOURCE AREAS

PART OF LOTS 15-18, CONC. 4, WSCR AND PART OF LOT 16, CONC. 3, WSCR (FORMER GEOGRAPHIC TOWNSHIP OF CALEDON), TOWN OF CALEDON, REGION OF PEEL

LEGEND

Subject Site - 262 ha (647.4ac)



Scale: N.T.S.
 DECEMBER 12, 2022



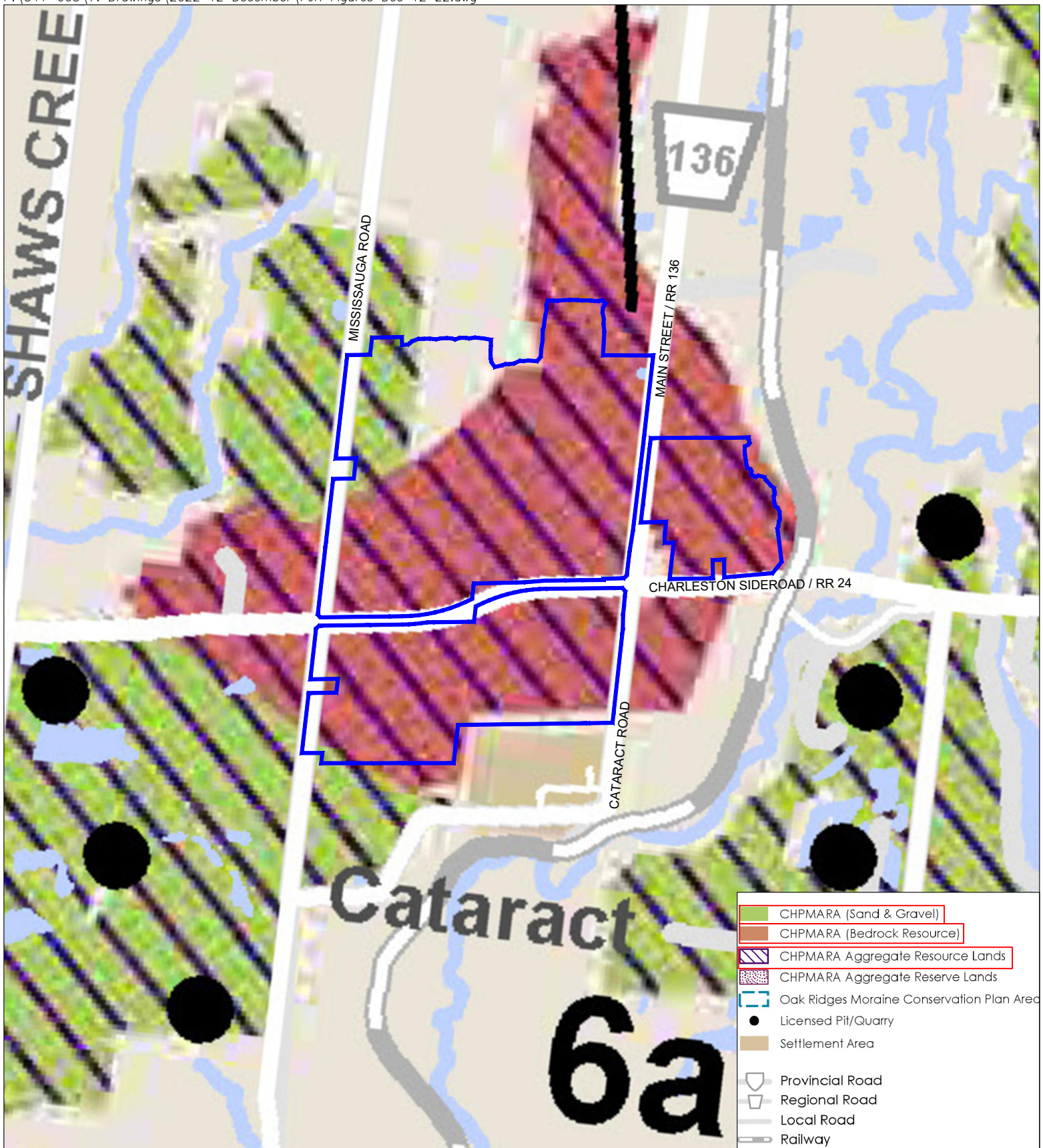


FIGURE 6
EXCERPT FROM TOWN OF CALEDON
OFFICIAL PLAN - SCHEDULE L:
CHPMARA

(TOWN OF CALEDON OFFICIAL PLAN, APRIL 2018)

PART OF LOTS 15-18, CONC. 4, WSCR AND
 PART OF LOT 16, CONC. 3, WSCR (FORMER GEOGRAPHIC
 TOWNSHIP OF CALEDON),
 TOWN OF CALEDON, REGION OF PEEL

LEGEND

Subject Site - 262 ha (647.4ac)



Scale: N.T.S.
 DECEMBER 12, 2022

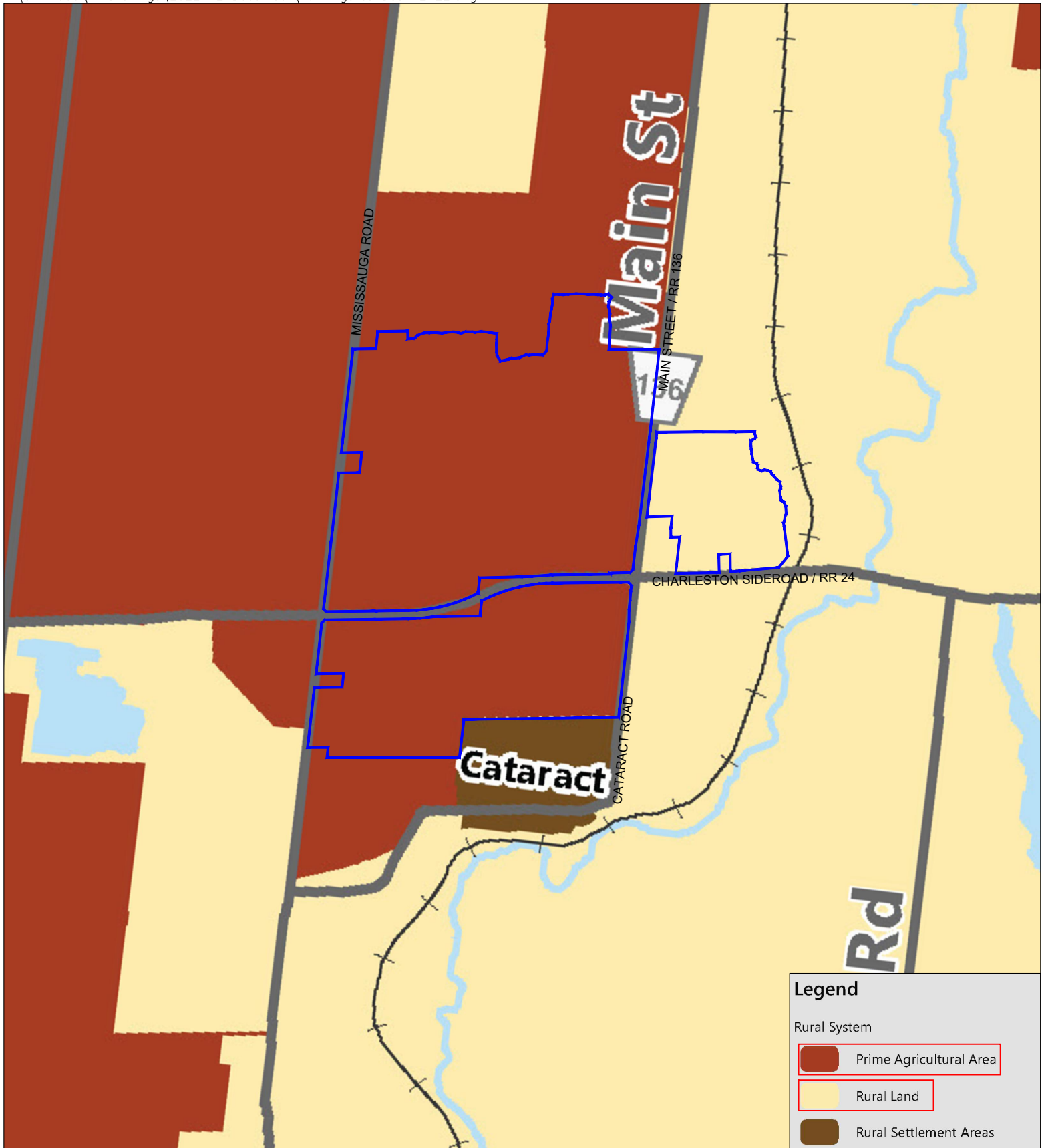


FIGURE 7
EXCERPT FROM REGION OF PEEL
OFFICIAL PLAN - SCHEDULE D-1:
RURAL SYSTEM




PART OF LOTS 15-18, CONC. 4, WSCR AND
 PART OF LOT 16, CONC. 3, WSCR (FORMER
 GEOGRAPHIC TOWNSHIP OF CALEDON),
 TOWN OF CALEDON, REGION OF PEEL

LEGEND

 Subject Site - 262 ha (647.4ac)

Legend

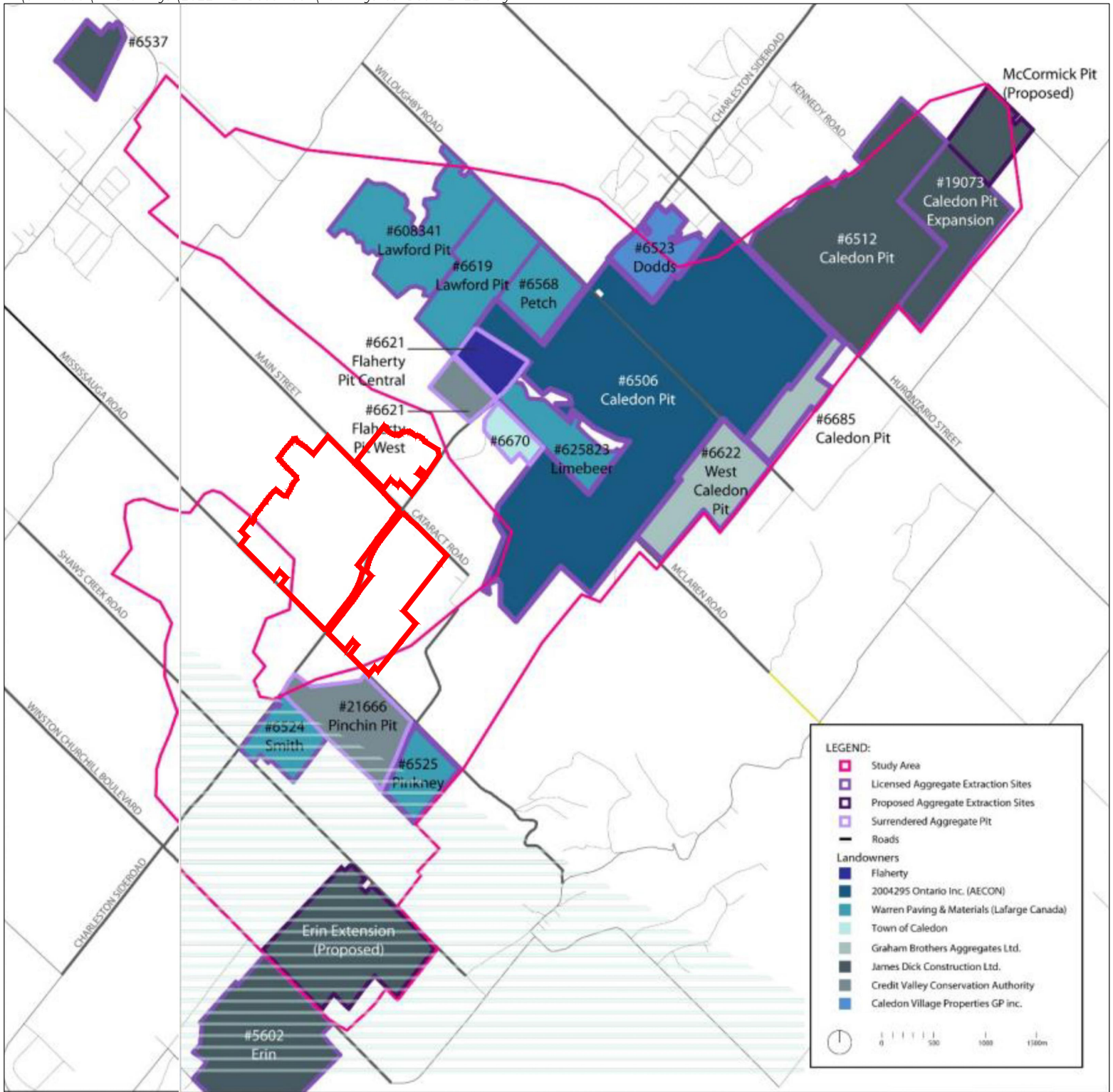
Rural System

-  Prime Agricultural Area
-  Rural Land
-  Rural Settlement Areas



Scale: N.T.S.
 DECEMBER 12, 2022





LEGEND:

- Study Area
- Licensed Aggregate Extraction Sites
- Proposed Aggregate Extraction Sites
- Surrendered Aggregate Pit
- Roads

Landowners

- Flaherty
- 2004295 Ontario Inc. (AECOM)
- Warren Paving & Materials (Lafarge Canada)
- Town of Caledon
- Graham Brothers Aggregates Ltd.
- James Dick Construction Ltd.
- Credit Valley Conservation Authority
- Caledon Village Properties GP inc.

0 500 1000 1500m

FIGURE 8 SURROUNDING PITS AND QUARRIES

PART OF LOTS 15-18, CONC. 4, WSCR AND PART OF LOT 16, CONC. 3, WSCR (FORMER GEOGRAPHIC TOWNSHIP OF CALEDON), TOWN OF CALEDON, REGION OF PEEL

LEGEND

Subject Site - 262 ha (647.4ac)



Scale: N.T.S.
DECEMBER 12, 2022





FIGURE 9

Note:

- 5.0 hectares of woodland shall be planted within the setbacks for the Main and North Areas within the first year of the licence being issued to provide a visual screen for nearby residences.
- The meadow area within the North Area shall be created within five years of the licence being issued.
- The meadow and woodland area adjacent to the South Area shall be created within five years of the licence being issued.

Final Rehabilitated Landform and Ecological Enhancement Areas

Caledon Pit and Quarry

Part of Lots 15-18, Concession 4 WSCR
 Part of Lot 16, Concession 3 WSCR
 Geographic Township of Caledon
 Township of Caledon
 Region of Peel

Legend

- Licence Boundary
- Limit of Extraction
- Additional Land Owned by CBM
- Gradual Grade or Island
- Grassland
- Woodland
- Wetland
- Lake
- Meadow

Ecological Enhancement Areas				
	Main Area	North Area	South Area	Total
Licence Boundary	152.3 ha	30.3 ha	79.4 ha	262.0 ha
Limit of Extraction	126.0 ha	16.0 ha	62.0 ha	204.0 ha
Gradual Grade or Island	1.3 ha	0.2 ha	6.4 ha	7.9 ha
Grassland	8.6 ha	1.3 ha	5.9 ha	15.8 ha
Lake	104.0 ha	9.5 ha	44.8 ha	158.3 ha
Meadow	N/A	7.6 ha	N/A	7.6 ha
Wetland	N/A	1.6 ha	3.2 ha	4.8 ha
Woodland	29.6 ha	8.9 ha	13.7 ha	52.2 ha
Existing Conditions	8.8 ha	1.2 ha	5.4 ha	15.4 ha
Outside Licence Boundaries				
Meadow	20.3 ha			
Woodland	15.5 ha			

Date: December 2022
 Sources: 2021 aerial photography from First Base Solutions
 Scale: 1:12,000

N:\brian\8816AF - CBM - Caledon Quarry\Drawings\Site Plan\CAD\8816AF - Site Plan.dwg

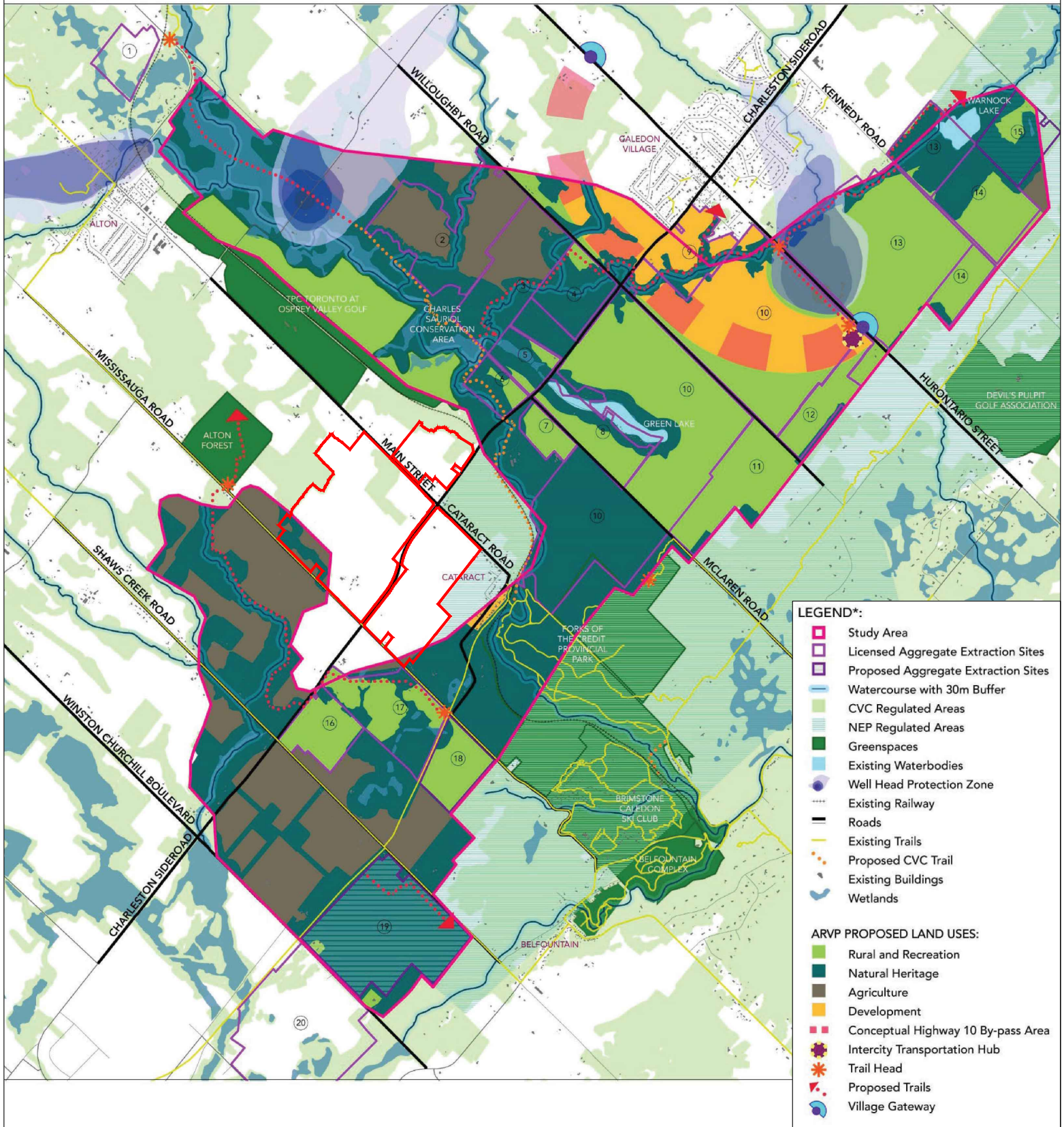


FIGURE 10
CALEDON AGGREGATE
REHABILITATION MASTER PLAN VISION
PLAN

PART OF LOTS 15-18, CONC. 4, WSCR AND PART OF LOT 16, CONC. 3, WSCR (FORMER GEOGRAPHIC TOWNSHIP OF CALEDON), TOWN OF CALEDON, REGION OF PEEL

LEGEND

Subject Site - 262 ha (647.4ac)



Scale: N.T.S.
 DECEMBER 12, 2022

SOURCE: : "Rehabilitation Master Plan: Belfountain and Caledon Sand and Gravel Resource Areas - Concept and Implementation Report (March 2021)



EXCERPT CALEDON RMP VISION PLAN:

EXCERPT CBM REHABILITATION PLAN:

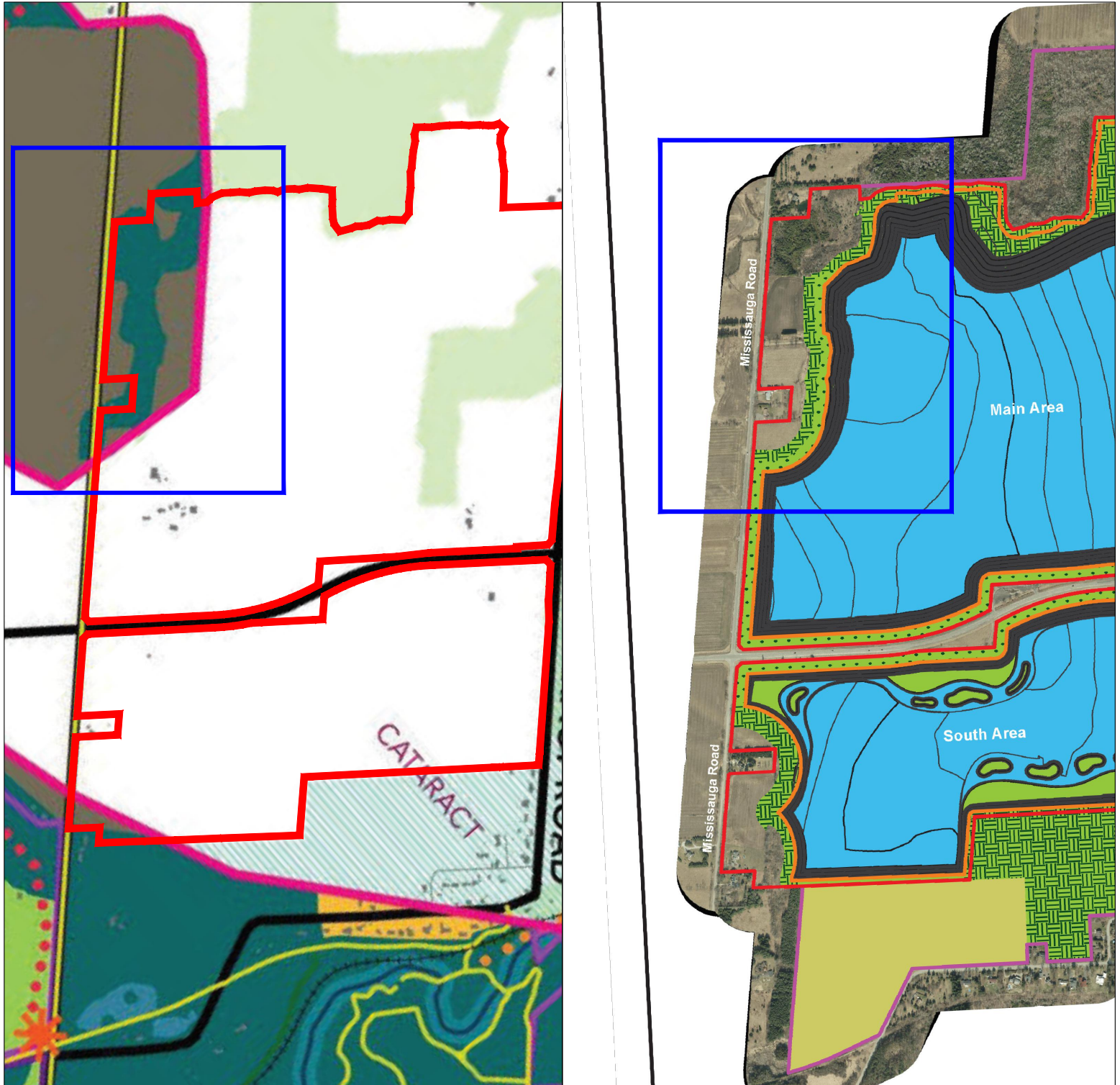


FIGURE 11
COMPARISON BETWEEN CALEDON
REHABILITATION MASTER PLAN VISION
PLAN AND CBM PROPOSED
REHABILITATION PLAN

LEGEND

- Subject Site - 262 ha (647.4ac)
- Comparison Area



Scale: N.T.S.
 DECEMBER 12, 2022

PART OF LOTS 15-18, CONC. 4, WSCR AND PART OF LOT 16, CONC. 3, WSCR (FORMER GEOGRAPHIC TOWNSHIP OF CALEDON), TOWN OF CALEDON, REGION OF PEEL

SOURCE: : "Rehabilitation Master Plan: Belfountain and Caledon Sand and Gravel Resource Areas - Concept and Implementation Report (March 2021)

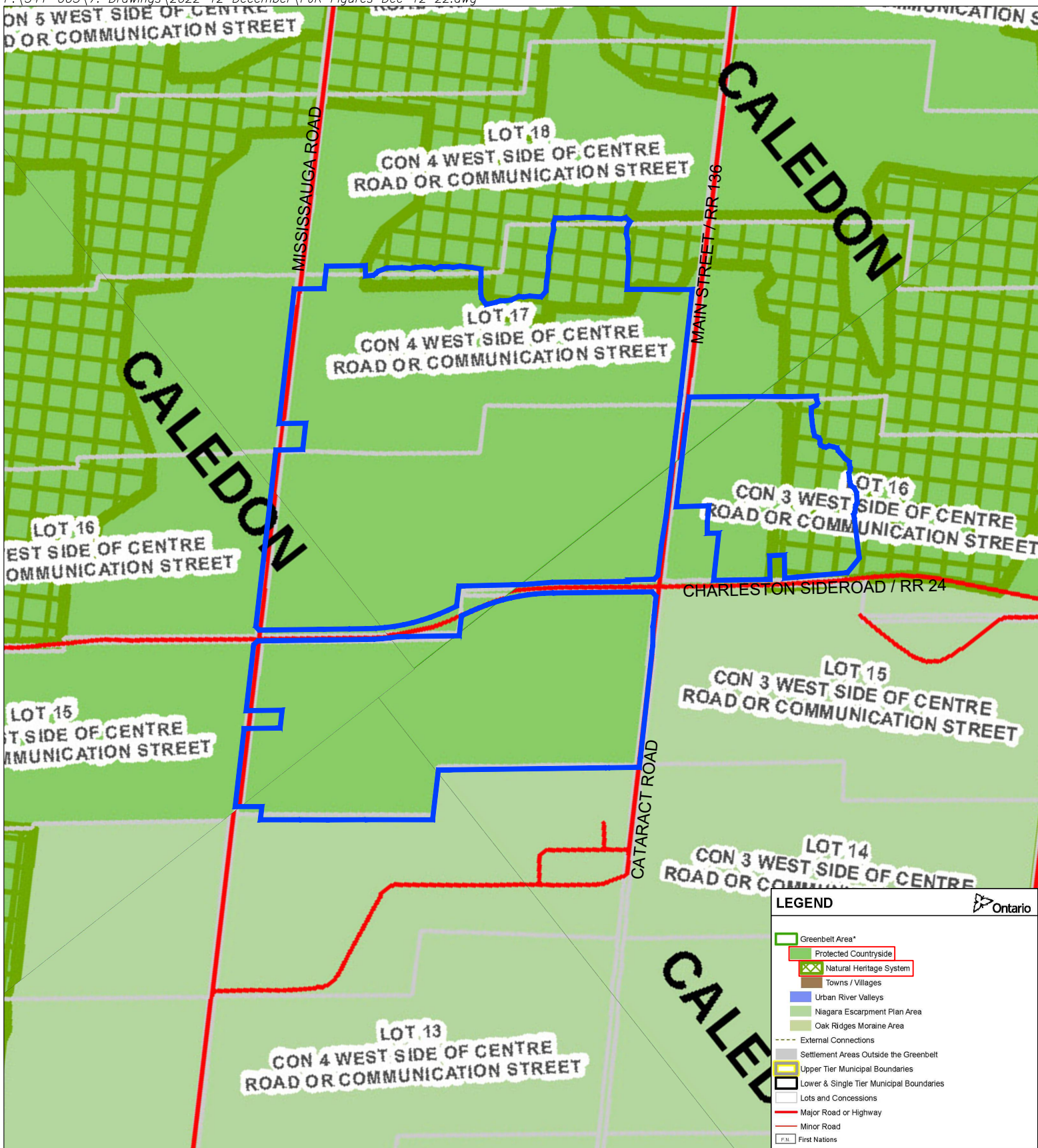


FIGURE 12
EXCERPT OF GREENBELT PLAN (2017)

PART OF LOTS 15-18, CONC. 4, WSCR AND PART OF LOT 16, CONC. 3, WSCR (FORMER GEOGRAPHIC TOWNSHIP OF CALEDON), TOWN OF CALEDON, REGION OF PEEL

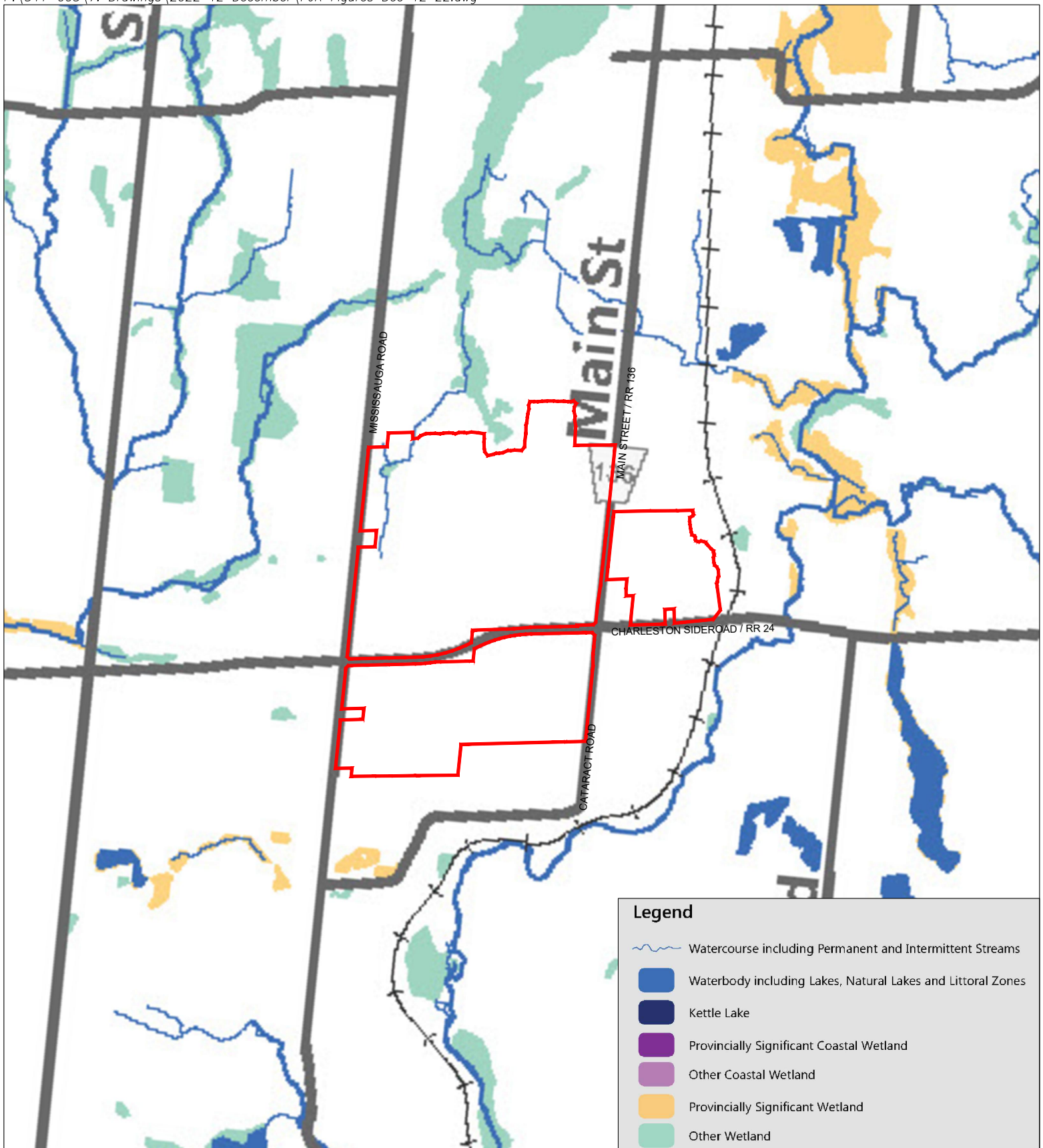
LEGEND
 Subject Site - 262 ha (647.4ac)

LEGEND

- Greenbelt Area*
- Protected Countryside
- Natural Heritage System
- Towns / Villages
- Urban River Valleys
- Niagara Escarpment Plan Area
- Oak Ridges Moraine Area
- External Connections
- Settlement Areas Outside the Greenbelt
- Upper Tier Municipal Boundaries
- Lower & Single Tier Municipal Boundaries
- Lots and Concessions
- Major Road or Highway
- Minor Road
- F.N. First Nations



Scale: N.T.S.
 DECEMBER 12, 2022



Legend

- Watercourse including Permanent and Intermittent Streams
- Waterbody including Lakes, Natural Lakes and Littoral Zones
- Kettle Lake
- Provincially Significant Coastal Wetland
- Other Coastal Wetland
- Provincially Significant Wetland
- Other Wetland

FIGURE 13
EXCERPT FROM REGION OF PEEL
OFFICIAL PLAN - SCHEDULE A-1:
WATER RESOURCE SYSTEM FEATURES &
AREAS

LEGEND
 Subject Site - 262 ha (647.4ac)



Scale: N.T.S.
 DECEMBER 12, 2022

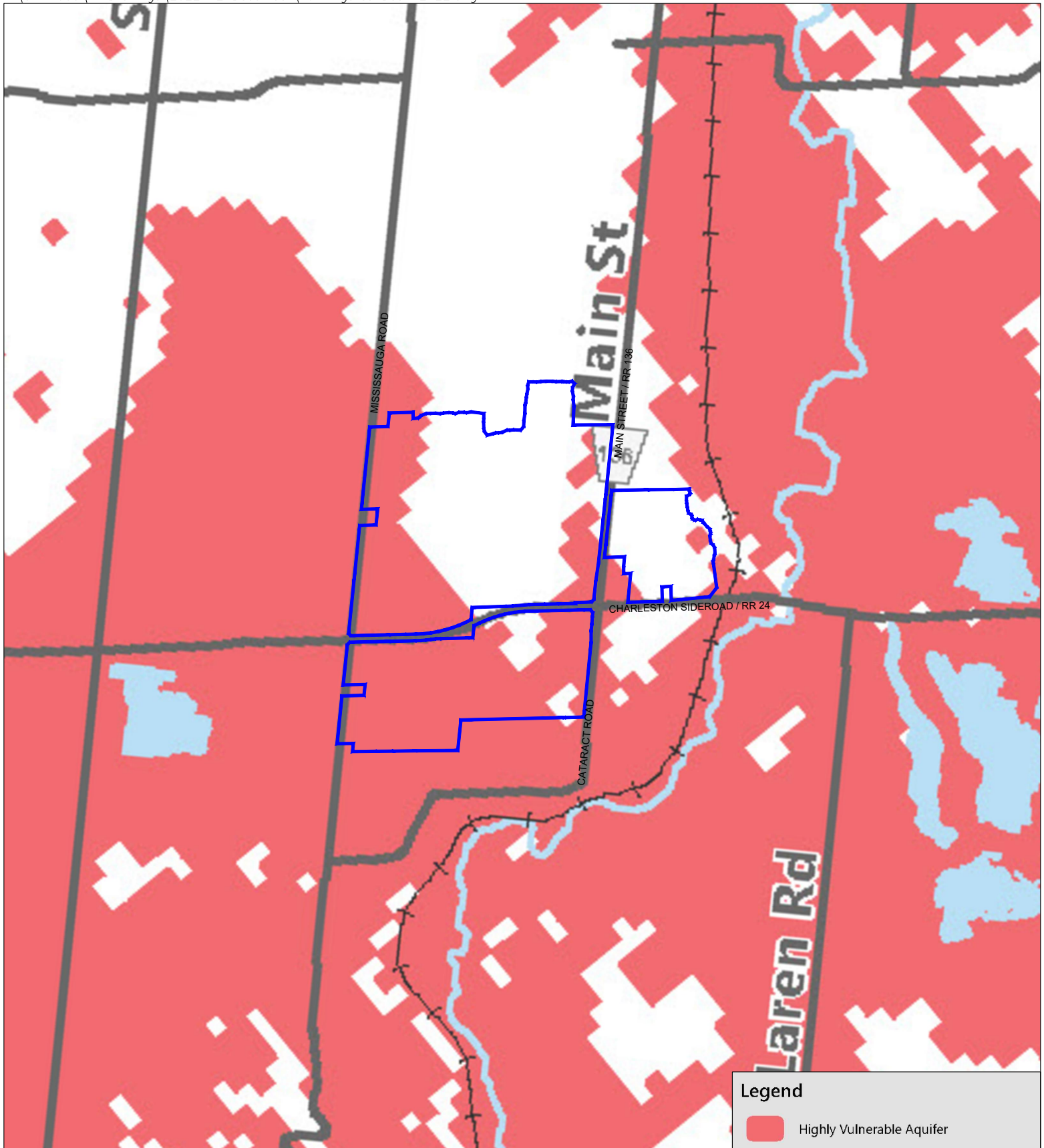



FIGURE 14
EXCERPT FROM REGION OF PEEL
OFFICIAL PLAN - SCHEDULE A-2:
HIGHLY VULNERABLE AQUIFERS

PART OF LOTS 15-18, CONC. 4, WSCR AND
 PART OF LOT 16, CONC. 3, WSCR (FORMER
 GEOGRAPHIC TOWNSHIP OF CALEDON),
 TOWN OF CALEDON, REGION OF PEEL

LEGEND

 Subject Site - 262 ha (647.4ac)

Legend

 Highly Vulnerable Aquifer



Scale: N.T.S.
 DECEMBER 12, 2022



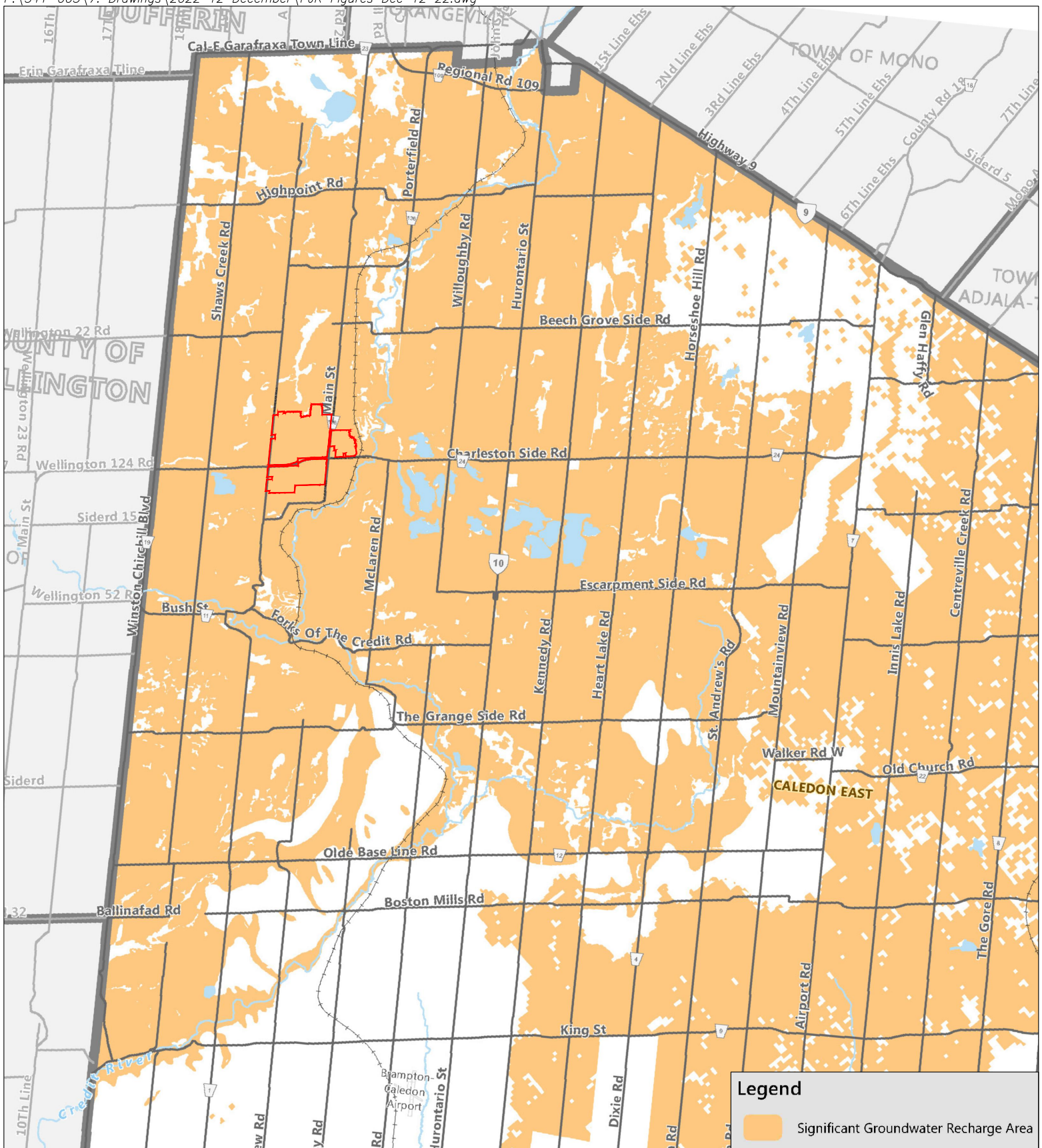



FIGURE 15
EXCERPT FROM REGION OF PEEL
OFFICIAL PLAN - SCHEDULE A-3:
SIGNIFICANT GROUNDWATER
RECHARGE AREAS

PART OF LOTS 15-18, CONC. 4, WSCR AND PART OF LOT 16, CONC. 3, WSCR (FORMER GEOGRAPHIC TOWNSHIP OF CALEDON), TOWN OF CALEDON, REGION OF PEEL

LEGEND

 Subject Site - 262 ha (647.4ac)

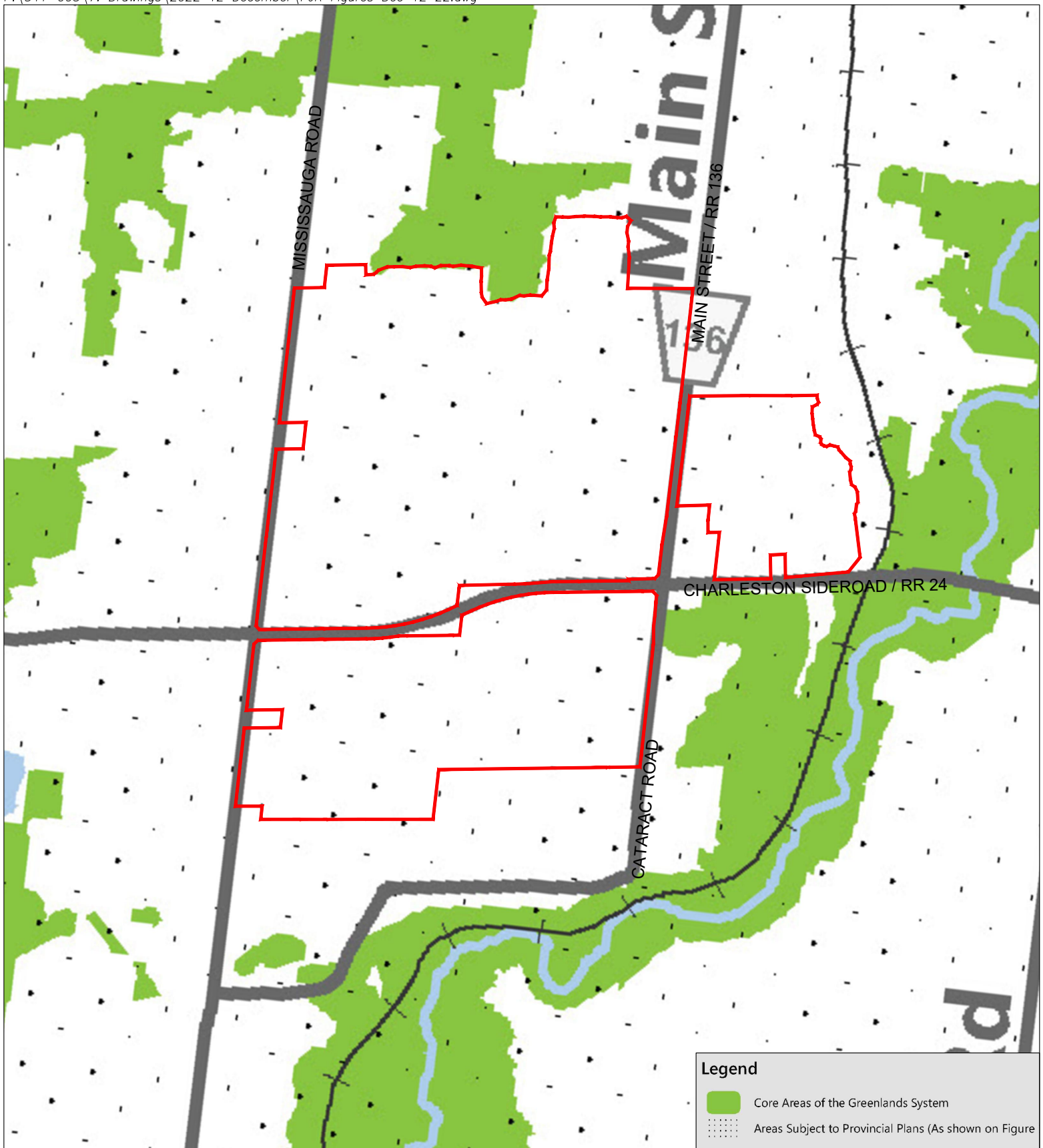
Legend

 Significant Groundwater Recharge Area



Scale: N.T.S.
 DECEMBER 12, 2022





Legend

- Core Areas of the Greenlands System
- Areas Subject to Provincial Plans (As shown on Figure)

FIGURE 16
EXCERPT FROM REGION OF PEEL
OFFICIAL PLAN - SCHEDULE C-2: CORE
AREAS OF THE GREENLANDS SYSTEM

PART OF LOTS 15-18, CONC. 4, WSCR AND PART OF LOT 16, CONC. 3, WSCR (FORMER GEOGRAPHIC TOWNSHIP OF CALEDON), TOWN OF CALEDON, REGION OF PEEL

LEGEND

- Subject Site - 262 ha (647.4ac)


 Scale: N.T.S.
 DECEMBER 12, 2022



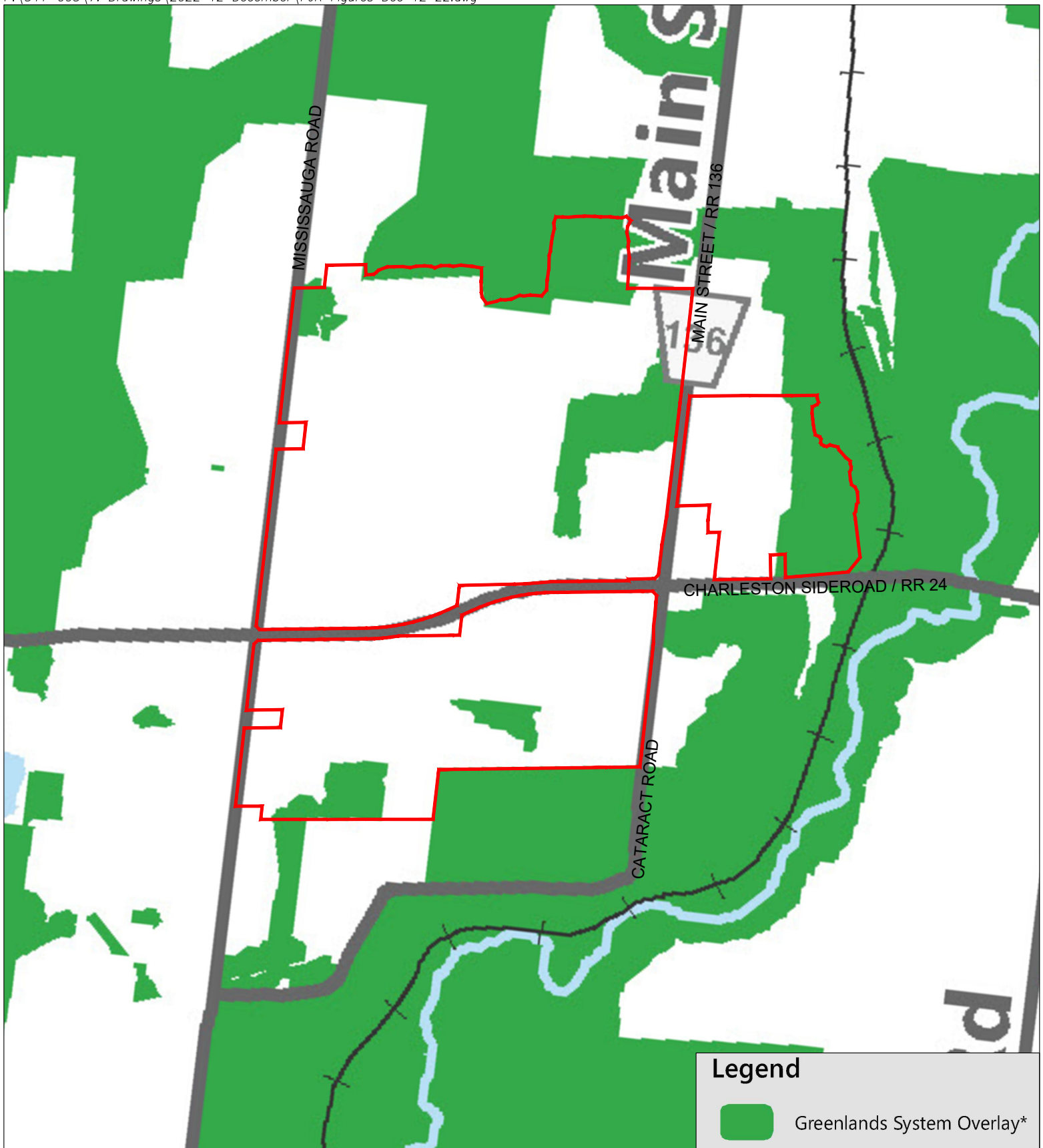



FIGURE 17
EXCERPT FROM REGION OF PEEL
OFFICIAL PLAN - SCHEDULE C1:
GREENLANDS SYSTEM

PART OF LOTS 15-18, CONC. 4, WSCR AND
 PART OF LOT 16, CONC. 3, WSCR (FORMER
 GEOGRAPHIC TOWNSHIP OF CALEDON),
 TOWN OF CALEDON, REGION OF PEEL

LEGEND

 Subject Site - 262 ha (647.4ac)

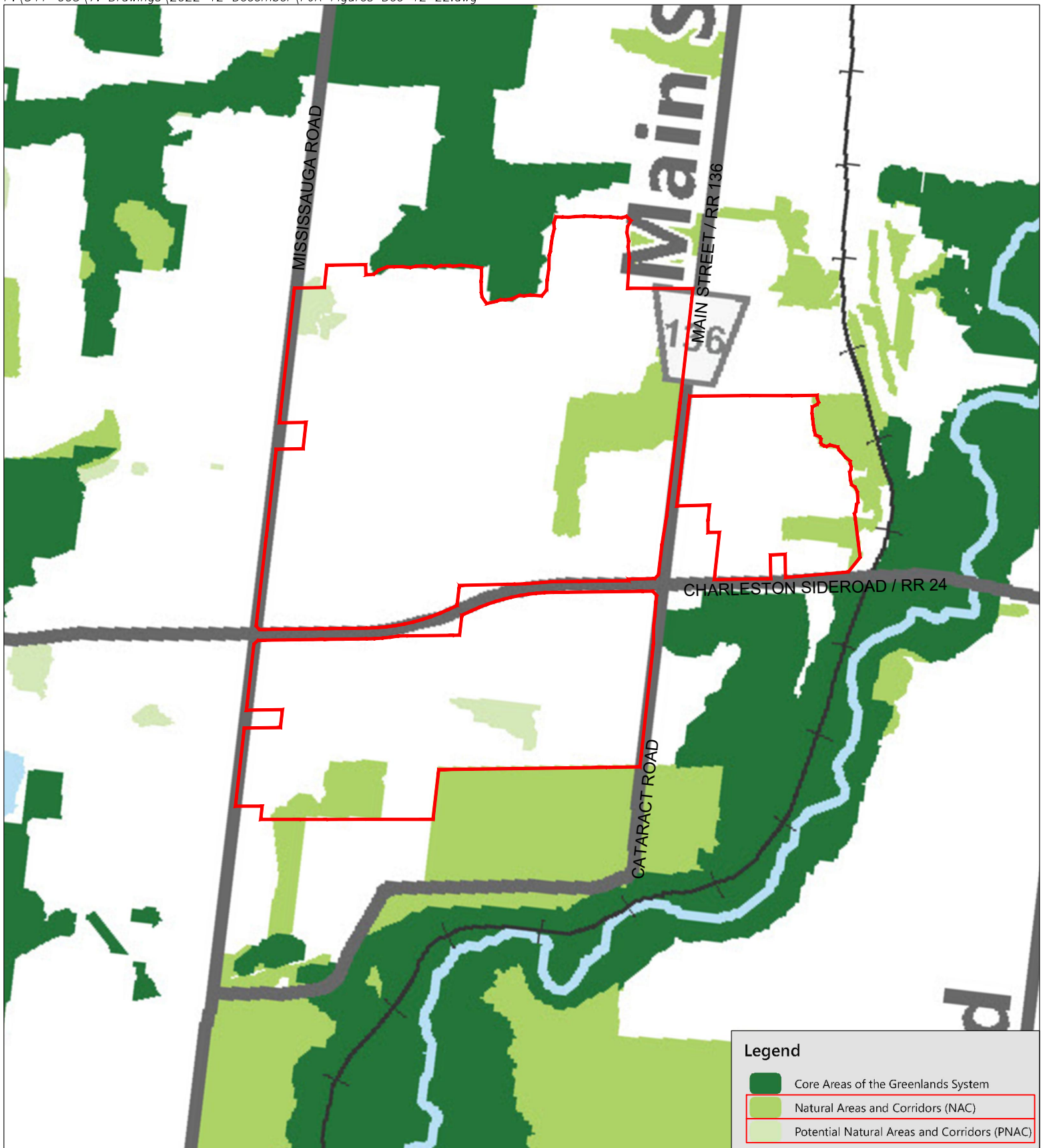
Legend

 Greenlands System Overlay*



Scale: N.T.S.
 DECEMBER 12, 2022





Legend

- Core Areas of the Greenlands System
- Natural Areas and Corridors (NAC)
- Potential Natural Areas and Corridors (PNAC)

FIGURE 18
EXCERPT FROM REGION OF PEEL
OFFICIAL PLAN - FIGURE 7:
REGIONAL GREENLANDS SYSTEM

PART OF LOTS 15-18, CONC. 4, WSCR AND
 PART OF LOT 16, CONC. 3, WSCR (FORMER
 GEOGRAPHIC TOWNSHIP OF CALEDON),
 TOWN OF CALEDON, REGION OF PEEL

LEGEND

Subject Site - 262 ha (647.4ac)



Scale: N.T.S.
 DECEMBER 12, 2022



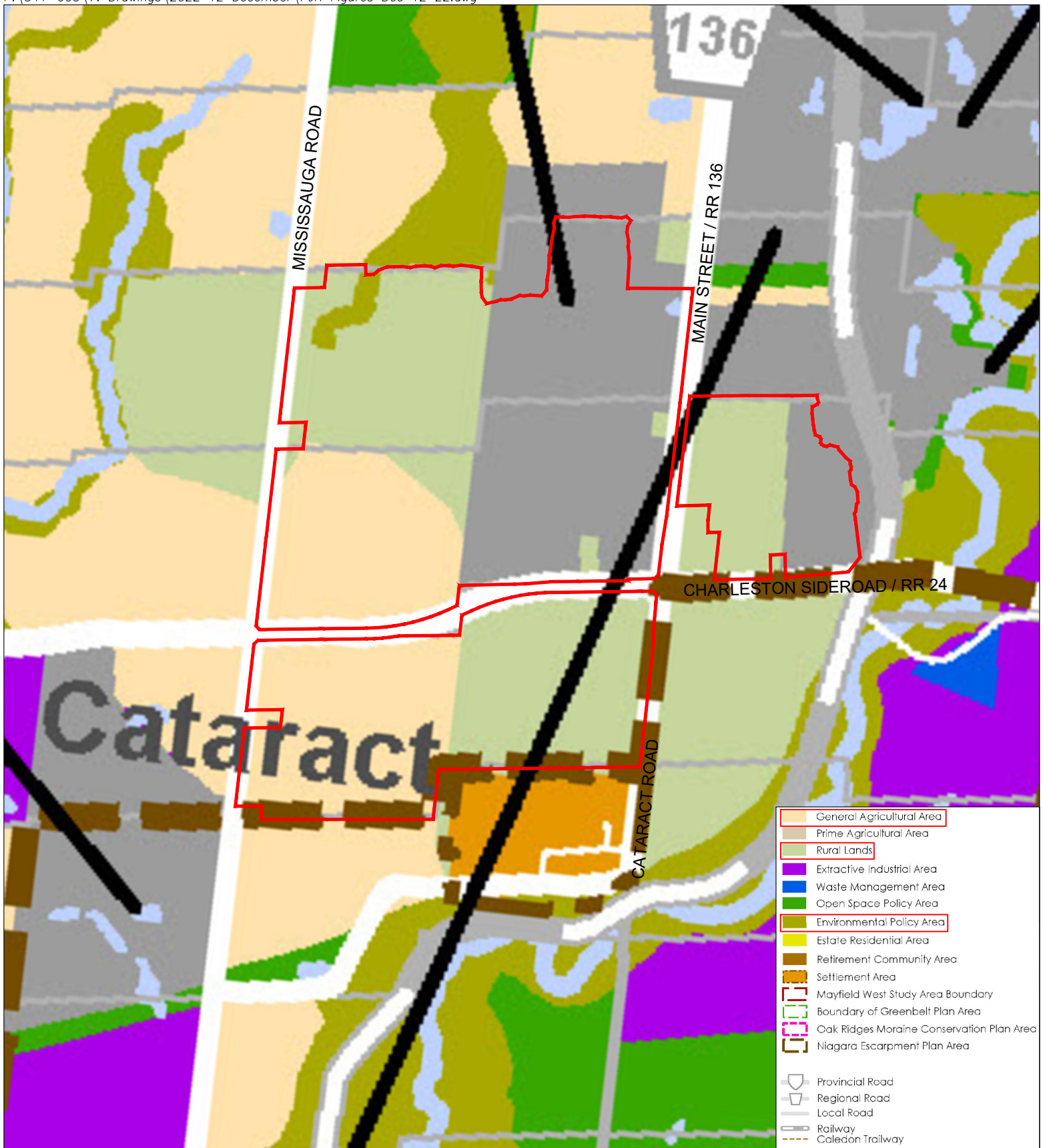


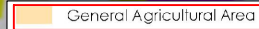
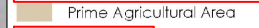
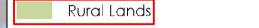


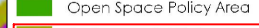
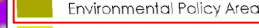



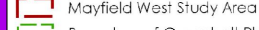
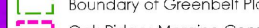
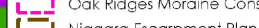
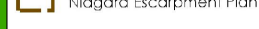

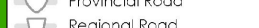
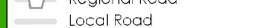
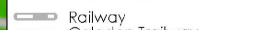
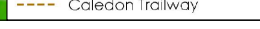
FIGURE 19
EXCERPT FROM TOWN OF CALEDON
OFFICIAL PLAN - SCHEDULE A:
LAND USE PLAN

(TOWN OF CALEDON OFFICIAL PLAN, APRIL 2018)

PART OF LOTS 15-18, CONC. 4, WSCR AND
 PART OF LOT 16, CONC. 3, WSCR (FORMER GEOGRAPHIC
 TOWNSHIP OF CALEDON),
 TOWN OF CALEDON, REGION OF PEEL

LEGEND

 Subject Site - 262 ha (647.4ac)

-  General Agricultural Area
-  Prime Agricultural Area
-  Rural Lands
-  Extractive Industrial Area
-  Waste Management Area
-  Open Space Policy Area
-  Environmental Policy Area
-  Estate Residential Area
-  Retirement Community Area
-  Settlement Area
-  Mayfield West Study Area Boundary
-  Boundary of Greenbelt Plan Area
-  Oak Ridges Moraine Conservation Plan Area
-  Niagara Escarpment Plan Area
-  Provincial Road
-  Regional Road
-  Local Road
-  Railway
-  Caledon Trailway



Scale: N.T.S.
 DECEMBER 12, 2022



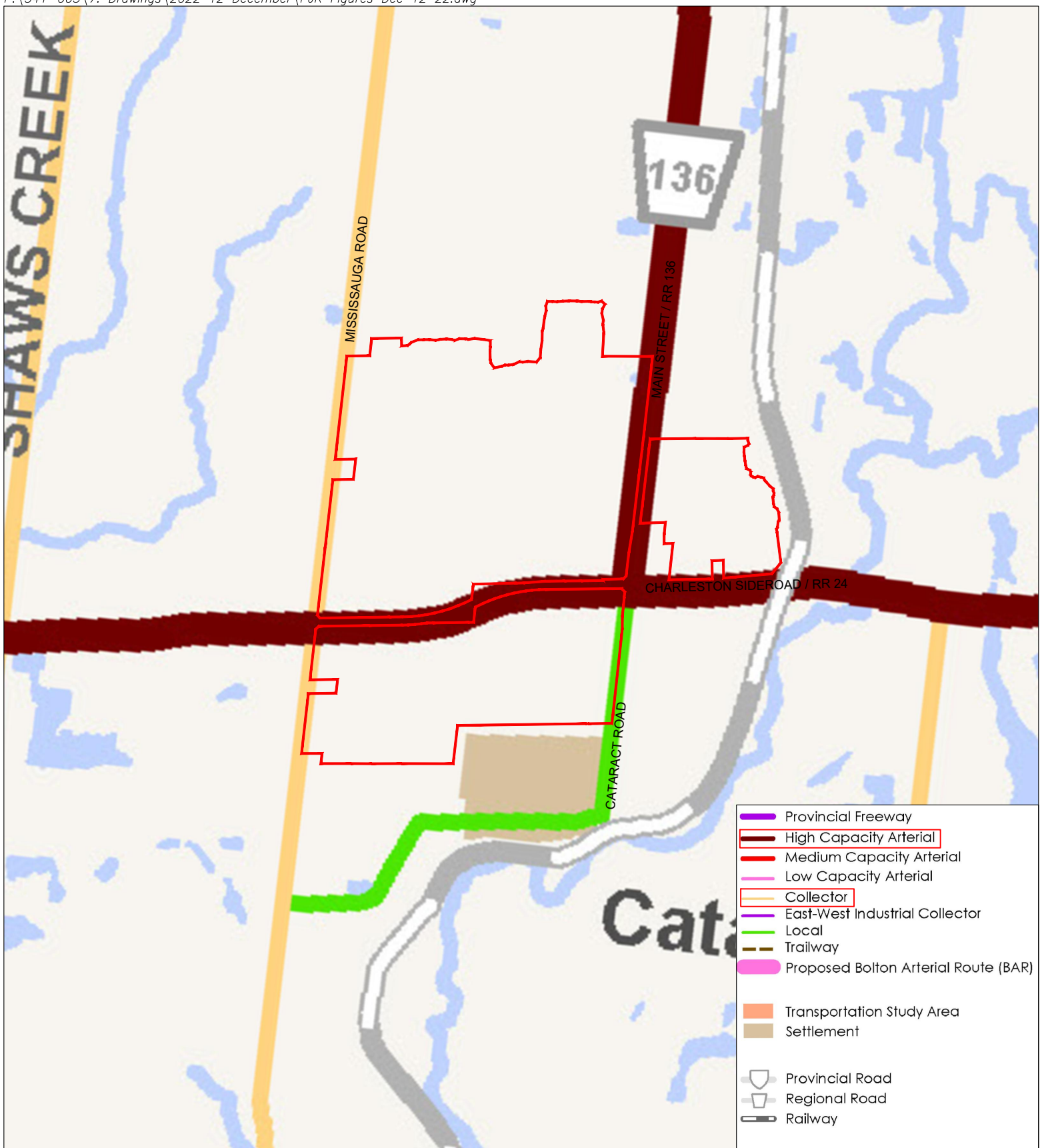


FIGURE 20
EXCERPT FROM TOWN OF CALEDON
OFFICIAL PLAN - SCHEDULE J:
LONG RANGE ROAD NETWORK
 (TOWN OF CALEDON OFFICIAL PLAN, APRIL 2018)

PART OF LOTS 15-18, CONC. 4, WSCR AND
 PART OF LOT 16, CONC. 3, WSCR (FORMER GEOGRAPHIC
 TOWNSHIP OF CALEDON),
 TOWN OF CALEDON, REGION OF PEEL



Scale: N.T.S.
 DECEMBER 12, 2022

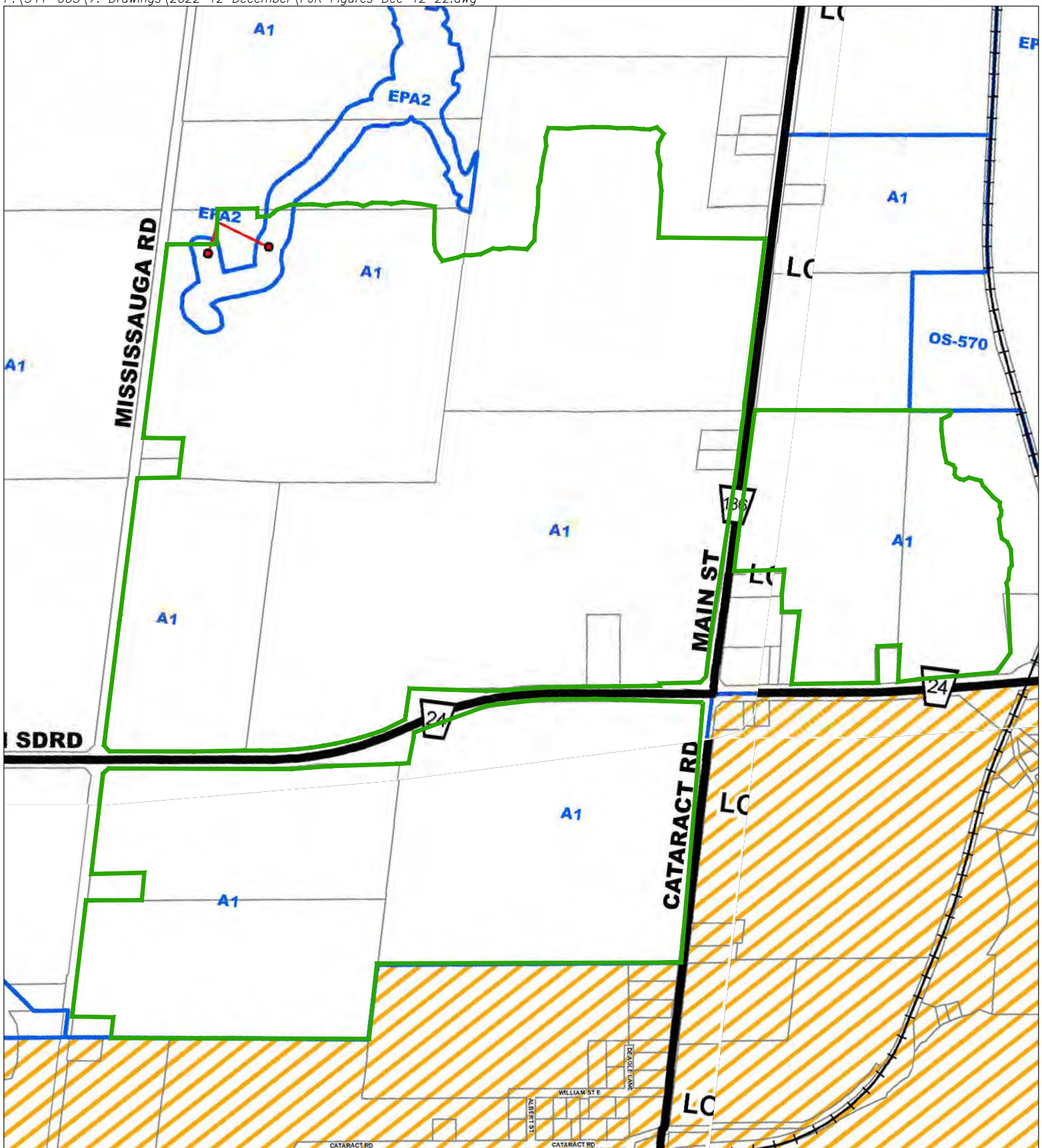


FIGURE 21
EXCERPT FROM TOWN OF CALEDON
ZONING BY-LAW NO. 2006-50

PART OF LOTS 15-18, CONC. 4, WSCR AND
PART OF LOT 16, CONC. 3, WSCR (FORMER
GEOGRAPHIC TOWNSHIP OF CALEDON),
TOWN OF CALEDON, REGION OF PEEL

LEGEND

 Subject Site - 262 ha (647.4ac)



Scale: N.T.S.
DECEMBER 12, 2022

APPENDIX A: Aggregate Resources Act Summary Statement

APPENDIX A:

AGGREGATE RESOURCES ACT **SUMMARY STATEMENT**

CBM Aggregates (CBM), a division of St. Marys Cement Inc. (Canada) is applying for a Class A Licence for a Pit / Quarry Below Water on lands located at the northwest, northeast and southwest intersection of Regional Road 24 (Charleston Sideroad) and Regional Road 136 (Main Street) in the Town of Caledon, Region of Peel. The Subject Site is located on lands legally described as Part of Lots 15-18, Concession 4 WSCR and Part of Lot 16, Concession 3 WSCR (former Geographic Township of Caledon). The proposed licence area is approximately 262 hectares and the proposed extraction area is approximately 204 hectares, divided into three areas referred to as the Main Area, the North Area and the South Area.

In August 2020, the previous Regulations and Provincial Standards were replaced with new regulations. The Aggregate Resources of Ontario: Technical Reports and Information Standards of August 2020 require that, effective April 1, 2021, site plans and technical reports which accompany an application be prepared and submitted according to the standards. This Aggregate Resources Act Summary Statement has been prepared to specifically support the complete Aggregate Resources Act application for the proposed establishment of the proposed CBM Class A Pit / Quarry Below Water Class A License Application in accordance with the Aggregate Resources Act Ontario Regulation 244/97.

The following sections are structured to provide information required by the Aggregate Resources Act ‘Technical Reports and Information Standards’ of August 2020 for an Aggregate Resources Act Summary Statement for a Class A Licence.

1.0 ARA Summary and Required Information

This Summary Statement in support of the application for a Class A licence confirms the following:

1.1 The agricultural classification of the proposed site, using the Canada Land Inventory classes. For any lands being returned to agriculture use as part of rehabilitation, the proposed rehabilitation techniques must be identified.

The proposed CBM Caledon Pit / Quarry is predominantly located in a prime agricultural area and pursuant to Provincial policy, an agricultural impact assessment was completed. The PPS defines prime agricultural areas as areas where prime agricultural lands predominate. Prime agricultural lands include specialty crop areas and Canada Land Inventory (CLI) Classes 1, 2 and 3 soils, in this order of priority for protection. As confirmed in the Agricultural Impact Assessment (AIA) (Colville, 2022), the Region of Peel Official Plan (2022) maps the portion of the Subject Site west of Main Street as ‘Prime Agricultural Area’ on Schedule D-1 (Rural System) in the Region’s

Official Plan (*see Figure 7: Excerpt Schedule D-1 Region of Peel (Rural System)*). The portion of the Subject Site east of Main Street is designated “Rural Lands”. The AIA confirms that approximately 45% of the Subject Site contains prime agricultural lands (consisting of CLI Class 2) and the balance, consisting of approximately 55% of the Subject Site, consists of non-prime agricultural lands (i.e. CLI Classes 4 and 5).

Within the Subject Site, the application proposes removal of 119.18 ha (45.41% of Subject Site) of CLI Class 2 lands for extraction. Planning policy permits aggregate extraction within prime agricultural areas, on prime agricultural lands, and does not require rehabilitation back to agricultural when certain tests have been met, including when there is a substantial quantity of mineral aggregate resources below the water table proposed for extraction. The AIA addresses these requirements and concludes that rehabilitation of the Site back to agricultural is not required.

1.2 Applicable planning and land use considerations that are relevant on or adjacent to where the proposed site will be located, such as provincial or Crown land plans/policies and municipal planning documents.

Prior to issuance of the Aggregate Resources Act Class A Licence for the proposed CBM Caledon Pit /Quarry, an amendment to the Town of Caledon Official Plan and Zoning By-Law is required. These applications are being filed with the Town of Caledon in December 2022.

The Subject Site is mapped as HPMARA in the Region of Peel Official Plan and CHPMARA in the Town’s Official Plan, which represents an area of primary significance for sand and gravel and bedrock resources and is protected and prioritized for potential future extraction. The Site includes approximately 80 million tonnes of high quality dolostone bedrock resource and approximately 5 million tonnes of high quality sand and gravel resource.

The Site and surrounding lands are located within a rural area within the Town of Caledon. Surrounding land uses include a mix of agricultural, rural residential, existing licenced pits, Hamlet of Cataract, natural heritage areas including the Credit River, a golf course, the Charles Sauriol Conservation Area, and rural roads. The Site is located close to the GTA market and will result in minimizing the length and number of vehicle trips required to transport an essential raw material needed for the construction and maintenance of communities, thereby minimizing overall social, economic and environmental impacts.

The Region of Peel Official Plan includes mapping, objectives and policies indicating where new aggregate operations are encouraged to locate, and policy directives to evaluate applications to ensure social and environmental impacts are minimized. An amendment to the Region of Peel Official Plan is not required to permit a new aggregate operation in Peel.

The Town of Caledon Official Plan and Zoning By-Law require amendments to permit a new mineral aggregate operation. The Town’s Official Plan includes similar mapping and policies to identify where new operations are encouraged to locate, and policies to evaluate a proposal, but the Caledon Official Plan does not pre-designate land for new mineral aggregate operations.

New (below water) aggregate operations, such as the proposed CBM Caledon Pit / Quarry, require a Town of Caledon Official Plan Amendment to redesignate the lands to “Extractive Industrial B Area”. The proposed OPA for the CBM Caledon Pit/Quarry also includes an area in the northwest corner of the Site to be designated “Environmental Policy Area”, consistent with a tributary feature in that vicinity. As well, an amendment to the Town of Caledon Zoning By-Law to rezone the subject lands to “MX-YY” (Extractive Industrial-Special) and “EPA1-487” (Environmental Policy Area 1 – 487) to implement the Official Plan Amendment to permit an aggregate quarry, and to permit licencing (but not extraction) within the northwest corner of the Site (within the ‘EPA1-487’ zone) will be required. Site-specific relief to the parent “MX” zone is proposed to recognize the overall proposed GFA on Site, to add specificity to the proposed uses on Site, and to clearly define that the contiguous parcels of land/lots within each of the Main Area, North Area and South Area are to be considered a ‘lot’ for the purposes of this proposal. Accordingly, an “MX-Special” zone is being sought for the majority of the Site.

The primary market area for the proposed CBM Caledon Pit / Quarry is the Greater Toronto Area, including the Town of Caledon and the Region of Peel. This Site represents a close to market source of a high quality mineral aggregate resource. Aggregates are a non-renewable natural resource found at fixed locations, and Caledon has a plentiful supply of aggregates, including in the vicinity of, and within, the Subject Site. Aggregates are important to our everyday lives and the economy and, accordingly, aggregates are to be protected for future use and should be made available close to the market within which they are to be used. The presence of high quality bedrock known as Gasport Amabel on Site presents an opportunity to manage and produce the aggregate resource close to existing, established haul routes along Charleston Sdrd.. and Highway 10, and close to the GTA market.

The following is a summary of what is presented in the Planning Justification Report and in a number of technical reports to address provincial, regional and Town of Caledon policy:

- For Ontario and Caledon to meet their climate targets, there will be a need to significantly reduce GHG emissions from the transportation sector, which is the leading source of emissions in the province. Close-to-market aggregate production from quarries such as the one proposed in Caledon can cost-effectively reduce emissions from transportation.
- The proposed haul route is an existing and identified haul route in the Town of Caledon Official Plan. The Transportation Impact Study and Haul Route Assessment has demonstrated that with the implementation of the recommendations, the proposed truck traffic from the CBM Pit / Quarry will not have unacceptable impacts on the safe and efficient use of the road network.
- The proposed Site access is located along Charleston Sideroad in between Mississauga Road and Main Street and has been determined to be the most appropriate access location from a haul route, access spacing and impact to existing residents’ perspective. A traffic signal warrant is not specifically satisfied in this location however, it is recommended to improve the operation of the intersection by providing suitable gaps for trucks to enter and exit the Site and accelerate safely without posing risk to other vehicles using Charleston

Sideroad. It is noted that if the Region desires a signalized Site access, the installation of the signal can be implemented at CBM's expense.

- As part of the application, CBM is prepared to explore opportunity to convey approximately 36 ha along the southern limit of the Site (north of Cataract) permanently to a public authority for long term protection.
- With the implementation of the recommended mitigation measures consisting of berms, the proposed Caledon Pit/Quarry operation will have minimal effect on surrounding agricultural operations. The proposed pit /quarry will utilize existing haul routes minimizing potential traffic related impacts. It is expected that noise, vibration, and dust will be kept at provincial standard. It is also expected that there will be no impacts to surrounding wells, including farm wells. Groundwater monitoring will occur and if a farm well is affected, there are mitigation measures in place to quickly restore an adequate water supply to farming operation(s).
- Licencing of the proposed Caledon Quarry will be consistent with the agricultural-related policies provided in provincial, regional and local planning documents regarding mineral extraction in prime agricultural areas.
- The proposed application has been subject to a Stage 1/2 Archaeological Assessment and significant archaeological resources have been conserved. There are areas of the Site that require additional archaeological assessment and these areas have been identified on the Site Plans and no site alteration or development is permitted until these sites are cleared of archaeological potential.
- The proposed application has been subject to a Cultural Heritage Report and the majority of the Site does not include significant built heritage resources and significant cultural heritage landscapes. Portions of five listed (not designated) or inventoried heritage properties are located within the Site and may contain heritage potential. Accordingly, these areas require additional cultural heritage assessment and these areas have been identified on the Site Plans and no site alteration or development is permitted until additional assessment is completed and the recommendations of the additional study are implemented. As a result, significant built heritage resources and significant cultural heritage resources are conserved.
- The Visual Impact Assessment has assessed the significant views and how they might be affected by the proposed extractive operation, including the anticipated changes to the natural landscape and the cultural landscape that would result from the operation. The visual assessment identifies required mitigation measures such as berms, entrance designs, vegetation, landscaping and operational matters, and with implementation of the recommendations, the Site has been designed to not result in any unacceptable visual impacts on surrounding land uses. Site visibility will be predominately limited to the establishment of berm and tree screening features that will be successful at eliminating the visibility of the aggregate extraction activity. With the implementation of the proposed rehabilitation plan in the long term, the Site will result in a visual enhancement compared

to existing conditions. Specifically, the resulting natural landscape will feature several lakes and a mosaic of woodlands, grasslands and wetlands that will complement and enhance the current agricultural aesthetic.

- An Air Quality Impact Assessment was completed and confirms that the maximum off-Site predicted cumulative concentrations as a result of emissions from the Site are below the assessment criteria. It is noted that with the implementation of the recommendations including the site's Best Management Practices, concentrations of emissions from the Site are expected to be below the ambient air quality criteria at all surrounding sensitive land uses. As well, the Site has been designed to minimize and mitigate to acceptable levels any potential adverse effects from dust and other air pollutants in accordance with provincial guidelines, standards and procedures.
- A Noise Assessment Report has been completed and confirms that after the implementation of identified noise controls or equivalent measures, the Site will operate in accordance with applicable noise limits as outlined in NPC 300 at all surrounding sensitive land uses. The Site has been designed with mitigation measures to minimize any potential adverse effects from noise to within acceptable levels in accordance with provincial guidelines, standards and procedures.
- A Blast Impact Assessment was completed and it was confirmed that with the implementation of the recommendations contained in the report, the Site will be operated in accordance with the current quarry blasting guidelines published by the MECP (NPC-119) at all surrounding sensitive land uses. It is also confirmed that the Site has been designed to minimize and mitigate to acceptable levels any potential adverse effects from blasting in accordance with provincial guidelines, standards and procedures.
- The Blast Impact Assessment confirms that all blasting and blast monitoring would occur in accordance with the Aggregate Resources Act (Ontario Ministry of Natural Resources and Forestry, 2017) prescribed conditions in order to ensure compliance with the provincial guidelines and through proper blast design and diligence in inspecting the geology before every blast, flyrock will be maintained within the proposed quarry extraction limits.
- The Site does not contain any Core Areas of the Region of Peel Greenlands System, and the proposed extraction area does not include provincially significant wetlands, fish habitat, life science areas of natural and scientific interest (ANSI), earth science ANSI, significant valleylands, significant wildlife habitat, significant woodlands, sand barrens, savannahs, tallgrass prairie or alvars.
- A portion of the Main Area and North Area is part of the Greenbelt "Natural Heritage System". These areas do not include significant woodlands or habitat of endangered and threatened species habitat and therefore mineral aggregate operations are a permitted use. The rehabilitation plan for these areas has been designed to significantly enhance the Greenbelt Natural Heritage System compared to existing conditions.

- The proposed extraction area includes the removal of 6.3 ha of habitat for endangered species habitat for bats. This habitat is located outside of the Greenbelt Plan Natural Heritage System and development will be completed in accordance with provincial requirements. As a result, the application will result in an overall benefit for bat habitat.
- The proposed extraction area results in the removal of 15.8 ha of habitat for threatened species habitat for bobolink and eastern meadowlark. This habitat is located outside of the Greenbelt Plan Natural Heritage System and development will be completed in accordance with provincial requirements. As a result, the application will result in an overall benefit for bobolink and eastern meadowlark habitat.
- The proposed CBM Caledon Pit / Quarry results in the removal of 18.9 ha of non-significant woodland areas and 67.7 ha of woodland area will be created through off Site ecological enhancement and the rehabilitation plan. Of this, 52.2 ha of woodland areas will be created within the licence area as part of visual screening and rehabilitation plan. 5.0 ha of this will be planted within the first year of the licence being issued. Outside of the licence area, a 15.5 ha woodland will be created within five years of the licence being issued. Taking into consideration the proposed off-Site ecological enhancement plan and the rehabilitation plan, woodland areas will be increased by a 3.6 to 1 ratio (67.7 ha to be created and 18.9 ha to be removed);
- The proposed CBM Caledon Pit / Quarry results in the removal of 0.1 ha of non-significant wetland areas and the proposed rehabilitation plan will create 4.8 ha of wetland area. As a result, wetland areas on Site will be increased by a 48:1 ratio.
- In total the application results in the removal of 22.2 ha of key natural heritage features (i.e. non-significant wetland and habitat of endangered and threatened species) that are permitted to be removed in accordance with applicable policies. Taking into account the proposed rehabilitation plan and the off-Site ecological enhancement plan, the application results in the creation of 100.4 ha of new key natural heritage features (i.e. meadow, wetland, woodland) and 158.3 ha of new key hydrologic features (i.e. lake) that is also considered fish habitat, which is a key natural heritage feature.
- The proposed Caledon Pit / Quarry is within the Credit Valley Source Protection Area but is not located in a wellhead protection area (WHPA) or an intake protection zone (IPZ) and there will be no impacts to municipal water supplies.
- Of the approximately 100 water supply wells evaluated in the Water Report Level 1/2 and Maximum Predicted Water Table Report, a majority of the wells are located at a depth below the proposed quarry floor and they will not be impacted. There are 15 residential wells that have the potential to be affected with respect to water quantity/levels due to their location relative to the predicted zone of influence of the Site, and their relatively shallow well construction in comparison to other wells in the area. In all cases, these wells could be deepened to the depth of other wells in the surrounding area to continue to ensure their ability to supply water should they be affected. In the event of a water well complaint there is an established procedure that the licensee must follow which requires an immediate

investigation and supply of temporary water if required. If any well was impacted by the proposed pit / quarry operation it is the licensee's responsibility to restore the water supply, at their expense. As part of the operation there will be an extensive on-Site and off-Site groundwater monitoring program and annual reports that will be submitted to the government agencies and publicly available. As a result of the proposed design of the quarry, the comprehensive groundwater monitoring and reporting requirements and the water well complaint procedure, it is concluded that water supply wells in the surrounding area will be protected.

- The proposed extraction area does not contain any identified water resources on the Region of Peel Schedule A-1 (Water Resources, Systems and Features). The proposed licence area includes an identified feature in the northwest corner of the Main Area and this feature is located outside of the extraction area and will be protected.
- A small portion of Main Area, a very small portion of the North Area and the majority of the South Area is mapped as a Highly Vulnerable Aquifer on the Region of Peel Schedule A-2 (Highly Vulnerable Aquifers). This is very common for mineral aggregate resource areas, and based on the design of the operation, and the implementation of the recommendations contained the Water Report Level 1/2 and the Maximum Predicted Water Table Report, the proposed Caledon Pit / Quarry does not result in additional risk to the aquifer.
- Almost all of the Rural Area in the Region of Peel including the Main Area, North Area and South Area are mapped as a Significant Groundwater Recharge Area on the Region of Peel Schedule A-3 (Significant Groundwater Recharge Area). This is very common for mineral aggregate resource areas, and based on the design of the operation, and the implementation of the recommendations contained in the Water Report Level 1/2 and the Maximum Precited Water Table Report, the groundwater recharge function of the area will be maintained.
- There are no key hydrologic features located within the proposed extraction area. There is a 0.1 ha key hydrologic feature (i.e., wetland) that will be impacted for the construction of the proposed berm and this feature is permitted to be removed in accordance with applicable policies. There are also key hydrologic features (i.e., wetland and tributary) in the northwest corner of the Main Area and these features will be protected. Taking into consideration the rehabilitation plan, there are 4.8 ha of wetland to be created and 158.3 ha lake to be created resulting in 163 ha of new key hydrologic features.
- The application includes a detailed monitoring and reporting requirements to ensure ongoing verification that adjacent sensitive groundwater features and sensitive surface water features will be protected, improved or restored.
- With the implementation of the recommendations in this report, sensitive surface water features and sensitive groundwater features will be protected, improved and restored during operations.

- Taking into account rehabilitation, there will be a long term enhancement to the water resources system and features.
- The proposed application has been subject to a Socio-Economic Assessment which has assessed social impacts based on predictable, measurable, significant, objective effects on people caused by factors such as noise, dust, traffic levels and vibration in accordance with the Town of Caledon Official Plan. With the implementation of the recommendations from the various technical reports noise, dust, traffic and vibration levels will be mitigated to minimize impacts and ensure there will not be any unacceptable impacts on the community.
- The proposed CBM Caledon Pit / Quarry will directly result in significant economic benefits at the regional and local level taking into account the proposed jobs that will be generated, the increase in property taxes for the Town of Caledon and Region of Peel and School Boards, and the increase in revenue the Town and Region will receive from the annual aggregate licencing fees. Indirectly, the Region and Town's economy will also benefit due to the proximity of the Site to the consumer which results in reduced cost for transporting an essential raw material that is needed for the construction and maintenance of communities.
- Approximately 6.3% of the Site is subject to the Town's approved Rehabilitation Master Plan (RMP). The portion of the Site that is subject to the RMP is located in the northwest portion of the Site, adjacent to Mississauga Road, and the RMP envisions this area as natural heritage and adjacent agriculture. The Final Rehabilitated Landform and Ecological Enhancement Areas Plan for the proposal plans for natural heritage and agriculture in this location and is consistent with the Town's approved RMP.
- Approximately 93.7% of the Site is not subject to the Town's approved Rehabilitation Master Plan (RMP). The proposed rehabilitation plan envisions natural heritage ecological enhancements, including lakes, wetlands, woodlands, grasslands and meadows, and therefore the Plan is generally consistent with the vision for surrounding lands presented in the RMP.

Overall, the proposed CBM Caledon Pit / Quarry represents good planning, wise resource management and has been sited and designed to address the requirements of the Aggregate Resources Act Provincial Standards, be consistent with the Provincial Policy Statement, and conform to the Growth Plan for the Greater Golden Horseshoe, Greenbelt Plan, Region of Peel Official Plan and Town of Caledon Official Plan. A thorough discussion and analysis of relevant provincial, regional and local policy directives in the context of the proposal is contained within the Planning Justification Report.

1.3 If the proposed site is in a source protection area under the Clean Water Act, identify activities proposed at the site that are drinking water threats set out in applicable source protection plans, and provide details of how relevant source water protection policies will be followed and associated mitigation measures that will be implemented.

The proposed Caledon Pit / Quarry is within the Credit Valley Source Protection Area but is not located in a wellhead protection area (WHPA) or an intake protection zone (IPZ) and there will be no impacts to municipal water supplies. The Water Report notes that the closest municipal drinking water systems are the Alton Well Supply to the north and the Caledon Village-Alton Well Supply to the north and east-northeast. The Alton municipal wells are located approximately 3.4 km north-northwest of the Site, and the Caledon Village-Alton wells are located approximately 2.3 km north of the Site and 3.8 km east-northeast of the Site. The closest WHPA is approximately 1.9 km east-northeast of the Site and part of the Caledon Village-Alton WHPA. Since the Site is not located in any WHPAs, there are no significant threats to the municipal water supplies.

Additional discussion on the water resources and analysis for the CBM Caledon Pit / Quarry in the context of provincial, regional and local policy is contained in the Planning Justification Report and in the Water Report Level 1/2 and in the Maximum Predicted Water Table Report.

1.4 The quality and quantity of aggregate on site.

The Subject Site is mapped as HPMARA in the Region of Peel Official Plan and CHPMARA in the Town's Official Plan, which represents an area of primary significance for sand and gravel and bedrock resources and is protected and prioritized for potential future extraction (*see Figure 5 and 6*).

The proposed Extraction Area includes approximately 80 million tonnes of a high quality bedrock resource and approximately 5 million tonnes of a high quality sand and gravel resource. Testing has confirmed that the mineral aggregate resource found on-Site is a provincially significant resource (Gasport Amabel) and is suitable for the production of a wide range of construction products, including the use for high performance concrete, road building, and construction aggregate. The bedrock resource provides some of the strongest and most durable aggregate material in Southern Ontario. A drilling program by Golder indicates that the thickness of the targeted limestone lithology (Gasport Amabel) ranges from 8 m to 27 m.

1.5 The main haulage routes and proposed truck traffic to and from the site as well as, applicable entrance permits.

In the Transportation Impact Study and Haul Route Assessment, a haul route assessment was undertaken to determine the location of the new future Site access for the Caledon Pit / Quarry and assessed several Site access considerations including existing haul route restrictions, impact to existing residents, access spacing requirements in accordance with Region of Peel Road Characterization Study (RCS) and TAC guidelines, physical constraints, and safety considerations. It was determined that the preferred location of the proposed Site access is along Charleston Sideroad (Regional Road 24) between Mississauga Road and Main Street (Regional Road 136) /

Cataract Road. TYLin recommends the Site access be located approximately 600 metres east of Mississauga Road and 720 metres west of Regional Road 136, measured between curb extensions.

Horizontal and vertical sightline assessments were conducted in the field. Based on a 100 km/h design speed, the proposed Charleston Sideroad access location satisfies Transportation Association of Canada combination truck stopping sight distance and intersection sight distance requirements.

A traffic signal warrant was not explicitly satisfied at the proposed Charleston Sideroad Site access under future total conditions based on a traffic volume. However, signalization of the access is recommended to improve the operation of the intersection by providing suitable gaps for trucks to enter and exit the Site and accelerate safely without posing risk to other vehicles using Charleston Sideroad. It is noted that if the Region desires a signalized Site access, the installation of the signal can be implemented at the cost of the client. Additionally, Charleston Sideroad is classified as Rural Road and satisfies the Region's minimum 600-metre full movement intersection spacing design criteria, preserving the arterial function of Charleston Sideroad.

The proposed truck distribution includes 95% of truck traffic heading east on Charleston Sideroad towards Hurontario Street (with 90% travelling south and 5% travelling north on Hurontario Street) and the remaining 5% truck traffic heading west on Charleston Sideroad.

It is noted that the proposed haul route is an existing and identified haul route in the Town of Caledon Official Plan. As well, with the implementation of the recommendations, the proposed truck traffic from the CBM Pit / Quarry will not have unacceptable impacts on the safe and efficient use of the road network. From an overall transportation perspective, the proximity of the Site to market will result in minimizing the length and number of vehicle trips required to transport an essential raw material needed for the construction and maintenance of communities.

An analysis of transportation impacts and haul route assessment is discussed in more detail in the context of provincial, regional and local policy in the Planning Justification Report and also in the Transportation Impact study and Haul Route Assessment.

1.6. The progressive and final rehabilitation and the suitability of the proposed rehabilitation having regard to adjacent lands.

In accordance with the requirements of the ARA Provincial Standards, the extracted area in the CBM Caledon Pit / Quarry will be progressively rehabilitated, as outlined on the Site Plans (*Figure 9: Final Rehabilitated Landform and Ecological Enhancement Areas*). The progressive and final rehabilitation of an aggregate operation involves the management of the property's natural environment during and after the extraction process. Specifically, after gravel or bedrock is extracted in an area of a pit or quarry, progressive rehabilitation procedures are implemented.

The post-extraction rehabilitation plan has been designed to fit into the overall regional context and complement the existing topography and terrestrial and aquatic features existing and envisioned for, in the area.

As extraction will occur below the water table it would not be feasible to rehabilitate the lands back to agricultural condition therefore three lakes will be created which, when final rehabilitation is completed, will be approximately 158.3 hectares in total area between the Main Area, North Area and South Area. The proposed lakes will be surrounded by nearshore, riparian, and upland habitats and where possible, some cliff faces will be maintained post-extraction for additional habitat variety at the Site. Proposed rehabilitation of the extraction area will proceed progressively through each phase.

As well, a total of 67.7 ha of woodland will be planted off Site (15.5 ha) and on Site through rehabilitation (52.2 ha) to replace forest lost through the proposed extraction and to create connections between the rehabilitated habitat and those off-Site. The forest will be planted in two main blocks located in the main extraction area and to the south of the south extraction area.

A total of 27.9 ha of meadow habitat will be created in the north extraction area (7.6 ha) and to the south of the south extraction area, off Site (20.3 ha). The meadow areas will be planted primarily with grass species, as well as forbs or legumes. These meadow areas will provide habitat for eastern meadowlark and bobolink. The meadow and forest blocks in the southern parcel will also create a linkage with the Cataract Southwest PSW to the south, providing additional upland habitat to support wildlife using the PSW, and also enhancing erosion controls on the slope adjacent to the PSW.

The overall goal of the final rehabilitation plan is to create a landform that represents an ecological and visual enhancement and provides future opportunities for conservation, recreational, tourism and water management. Overall, the progressive and final rehabilitation plan for the Subject Site includes the creation of 158.3 hectares of lakes, 7.9 hectares of gradual grades and islands, 4.8 hectares of wetlands, 52.2 hectares of woodlands, 15.8 ha of grasslands, 7.6 ha of meadow, and 15.8 hectares to remain in existing conditions. The proposed rehabilitation has been designed to use all of the on-Site topsoil and overburden and does not require the importation of additional soils.

The proposed final rehabilitation plan is compatible with the surrounding lands through the creation of natural lake features, forest and meadow areas, environmental linkages, and adding a variety of landform features that will complement and benefit the existing community.

Additional discussion on the rehabilitation plan for the CBM Caledon Pit / Quarry in the context of provincial, regional and local policy is contained in the Planning Justification Report.

2.0 Technical Reports

The following technical reports are required pursuant to the Technical Reports and Information Standards for applications for a Class A licence:

2.1 Maximum Predicted Water Table Report

A Maximum Predicted Water Table Report has been prepared by Golder Associates Ltd. (December 2022). This report details how the maximum predicted water table is identified in metres above sea level, relative to the proposed depth of excavation at the Site. It is outlined in the report that the maximum predicted water table has been determined by monitoring the ground water table at the Site for a minimum of one (1) year to account for seasonal variations and influences due to precipitation. This supports the determination of the maximum predicted water table by Golder Associates Ltd.

2.2 Natural Environment Report

A Natural Environment Report has been prepared by Golder Associates Ltd. for the proposed CBM Caledon Pit / Quarry (December 2022).

The report has identified that the proposed extraction area does not include provincially significant wetlands, fish habitat, life science areas of natural and scientific interest (ANSI), earth science ANSI, significant valleylands, significant wildlife habitat, significant woodlands, sand barrens, savannahs, tallgrass prairie or alvars.

The proposed extraction area includes the removal of 6.3 ha of habitat for endangered species habitat for bats. This habitat is located outside of the Greenbelt Plan Natural Heritage System and development will be completed in accordance with provincial requirements. The Natural Environment Report confirms that although SAR habitat was identified on the Site for little brown myotis and eastern small-footed myotis (woodlands F and G) and bobolink and eastern meadowlark (pastures northeast of Charleston Sdrd. and Mississauga Road), these are not considered significant habitat of endangered or threatened species because woodlands F and G were assessed to be part of a roost network, but not a primary roosting area and, specifically, are not relied on as a critical resource for survival and reproduction. Through rehabilitation, 52.2 ha of woodland are proposed to be established on Site, and an additional 15.5 ha of woodland are proposed to be developed off Site, south of the licence limit within 5 years of the licence being issued. A replacement area of at least 6.3 ha of bat habitat will be established in these woodland areas. As a result, the application will result in an overall benefit for bat habitat.

The proposed extraction area results in the removal of 15.8 ha of habitat for threatened species habitat for bobolink and eastern meadowlark. This habitat is located outside of the Greenbelt Plan Natural Heritage System and development will be completed in accordance with provincial requirements. It is noted that the field supporting bobolink and eastern meadowlark are agricultural fields that are actively used for livestock and may also be planted in crop during some years. Accordingly, the fields are considered agricultural and do not represent a permanent or significant habitat for these grassland birds. Through rehabilitation, 7.6 ha of meadow will be

established in the North Area, and south of the licence area an additional 20.3 ha of meadow will be established within five years of the licence being issued. As a result, the application will result in an overall benefit for bobolink and eastern meadowlark habitat;

The Natural Environment Report assesses all features on and off Site and identifies and evaluates any negative impacts on the natural features or areas, including their ecological functions, and identifies any proposed preventative, mitigative or remedial measures.

In total the application results in the removal of 22.2 ha of key natural heritage features (i.e. non significant wetland and habitat of endangered and threatened species) that are permitted to be removed in accordance with applicable policies. Taking into account the proposed rehabilitation plan and the off-Site ecological enhancement plan, the application results in the creation of 100.4 ha of new key natural heritage features (i.e. meadow, wetland, woodland) and 158.3 ha of new key hydrologic features (i.e. lake) that is also considered fish habitat, which is a key natural heritage feature. It is confirmed that adjacent key natural heritage features will be protected from negative impacts based on the recommendations in the Natural Environment Report including sediment / erosion controls, ecological setback, water monitoring and mitigation, and the implementation of standard best management practices to control noise and dust.

Overall, the Natural Environment Report concludes that with the implementation of the recommendations in the report, the proposed application maintains and enhances connectivity between key natural heritage features, protects adjacent key natural heritage features from negative impacts, any key natural heritage proposed for extraction is appropriate taking into account applicable policy requirements, and the application results in a significant net ecological enhancement compared to existing conditions.

Additional discussion related to natural environment and potential impacts and opportunities for the proposal in the context of provincial, regional and local policy is contained in the Planning Justification Report and in the Natural Environment Report.

2.3 Cultural Heritage Report

A Stage 1/2 Archaeological Assessment and a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment for the Proposed CBM Caledon Pit / Quarry have been prepared by Golder Associates Ltd. (December 2022). The reports have been prepared to be consistent with provincial requirements under the Ontario Heritage Act and the Provincial Policy Statement.

The evaluation to determine the potential for archaeological resources was completed and identified 10 Euro-Canadian sites and 4 Pre-contact Indigenous sites for which a Stage 3 Assessment has been recommended. Each of these sites have met the requirements under the MTCS's Standards and Guidelines for Consultant Archaeologists requiring a Stage 3 Assessment. For each of these archaeological sites within the Subject Site, it is recommended that these sites are avoided and protected by establishing a 70 m "Archaeological Protection Area" around the extent of each site, until the requisite Stage 3 Assessment is completed (and possibly Stage 4 Mitigation, if necessary). These "Archaeological Protection Areas" have been identified on the ARA Site Plans for the proposed CBM Caledon Pit / Quarry and site alteration is prohibited within

these limits until such time as the Stage 3 (and possibly Stage 4) Archaeological Assessments are completed and clear these sites. The Stage 3 Assessments are currently underway and will be submitted to the Ministry upon completion.

The Stage 1/2 Archaeological Assessment has been submitted to the Ministry of Tourism, Culture and Sport and confirmation from the Ministry is expected in the near future. In the meantime, temporary avoidance and protection is confirmed.

In the Cultural Heritage Report, built heritage resources and cultural heritage landscapes have been evaluated for their cultural heritage potential. The Cultural Heritage Report concludes that there are 14 BHR and 2 CHLs within the study area which are located within a property parcel directly adjacent to the Subject Site, where no direct or indirect impacts are anticipated and no adverse impacts are anticipated to the property's potential CHVI (Cultural Heritage Value or Interest) and heritage attributes, as a result of the proposed extraction.

The report further concludes that that portions of five properties that are listed or inventoried (not designated) heritage properties are located within the Subject Site. The report notes that the potential heritage attributes on each property have been identified on the Aggregate Resources Act Site Plans with a 50 m construction buffer and no site alteration or development is permitted until a Heritage Impact Assessment is completed. The HIA will include a full evaluation of the property using the criteria prescribed in O. Reg. 9/06, provide a Statement of CHVI with list of heritage attributes, identify all direct and indirect impacts, and recommend site-specific mitigation measures to ensure the CHVI and heritage attributes of the property are conserved in accordance with provincial requirements.

Based on the recommendations of this report, surrounding cultural heritage landscapes will not be impacted by the proposal, and significant built heritage resources and significant cultural heritage resources are conserved.

Additional discussion related to cultural heritage as it relates to the proposal in the context of provincial, regional and local policy is contained in the Planning Justification Report and in the Cultural Heritage Report.

2.4 Agricultural Impact Assessment Report (subject to specified criteria)

An Agricultural Impact Assessment (December 2022) (AIA) has been completed by Colville Consulting Inc. in connection with the proposed CBM Caledon Pit/Quarry. The purpose of the AIA is to characterize the agricultural land base and agricultural operations within the Subject Site and within the Secondary Study Area, which relates to lands approximately 1 km beyond the Subject Site, and to identify potential impacts of the proposed CBM Caledon Pit/ Quarry. In cases where impacts cannot be avoided, the AIA recommends mitigation measures to minimize potential impacts to the extent feasible.

The proposed CBM Caledon Pit / Quarry is predominately located in a prime agricultural area. As per provincial policies, aggregate extraction applications in prime agricultural area need to include an AIA (A Place to Grow Growth Plan for the Greater Golden Horseshoe, 2020). Policies direct

that the AIA be completed in accordance with the Ontario Ministry of Agriculture, Food and Rural Affairs' Draft Agricultural Impact Assessment Guidance Document (2018). The AIA prepared for CBM's proposed Caledon Pit / Quarry follows the format and requirements of the draft AIA guidelines, and the approved Terms of Reference (ToR) prepared for this study.

The AIA concludes that the Caledon Pit / Quarry proposes to extract substantial volumes of high quality aggregate material both above and below the water table. Further, it notes that the portion of the proposed Caledon Pit / Quarry's licenced area west of Main St. is located in a designated prime agricultural area. The lands to the east of Main St. are designated rural land. The Subject Site is 262 ha in size of which approximately 119.18 ha (45%) is comprised of prime agricultural land. Mineral aggregate operations are permitted within both prime agricultural areas and rural areas.

Agricultural rehabilitation is not required on these lands for several reasons:

- the lands are not within a specialty crop area;
- there is a substantial quantity of high quality aggregate located below the water table and the depth of planned extraction makes restoration of pre-extraction agricultural capability unfeasible;
- other alternatives have been considered by the applicant and found to be unsuitable; and
- there are no remaining areas for agricultural rehabilitation to be maximized.

The AIA concludes that with the implementation of the recommended mitigation measures, the proposed Caledon Pit/Quarry operation will have minimal effect on surrounding agricultural operations. The proposed pit /quarry will utilize existing haul routes minimizing potential traffic related impacts. It is expected that noise, vibration, and dust will be kept at provincial standard. It is also expected that there will be no impacts to surrounding wells, including farm wells. Groundwater monitoring will occur and if a farm wells are affected, there are mitigation measures in place to quickly restore an adequate water supply to farming operation(s).

Licencing of the proposed Caledon Pit /Quarry will be consistent with the agricultural-related policies provided in provincial, regional and local planning documents regarding mineral extraction in prime agricultural areas.

Additional discussion related to agricultural impacts as it relates to the proposal in the context of provincial, regional and local policy is contained in the Planning Justification Report and in the Agricultural Impact Assessment.

2.5 Water Report, where proposing to extract below the maximum predicted water table

A Water Report Level 1/2 has been completed by Golder Associates Ltd. (December 2022). This report provides a description of the physical setting including local geology, hydrogeology, and surface water systems and assesses surface and groundwater resources and confirms that the proposed extraction area does not contain any identified water resources on the Region of Peel Schedule A-1 (Water Resources, Systems and Features) and the proposed licence area includes an

identified feature in the northwest corner of the Main Area and this feature is located outside of the extraction area and will be protected. Further, the report confirms that there are no key hydrologic features located within the proposed extraction area and there is a 0.1 ha key hydrologic feature (i.e., wetland) within the licence area that will be impacted for the construction of the proposed berm and this feature is permitted to be removed in accordance with applicable policies. There are also key hydrologic features (i.e., wetland and tributary) in the northwest corner of the Main Area and these features will be protected. Taking into consideration the rehabilitation plan, there are 4.8 ha of wetland to be created and 158.3 ha lake to be created resulting in 163 ha of new key hydrologic features.

The report also confirms that a portion of the Site are mapped as a Highly Vulnerable Aquifer on the Region of Peel Schedule A-2 (Highly Vulnerable Aquifers) and notes this is very common for mineral aggregate resource areas, and based on the design of the operation, and the implementation of the recommendations contained the Water Report, the proposed Caledon Pit / Quarry does not result in additional risk to the aquifer. As well, the Site is mapped as a Significant Groundwater Recharge Area on the Region of Peel Schedule A-3 (Significant Groundwater Recharge Area) and it is acknowledged that this is very common for mineral aggregate resource areas, and based on the design of the operation, and the implementation of the recommendations contained in the Water Report, the groundwater recharge function of the area will be maintained.

The report also examines water supply wells in the area and confirms that the majority of wells are located at a depth below the quarry floor and will not be impacted. Of the approximately 15 residential wells that have the potential to be impacted during operations by the proposed pit / quarry development (due to their location relative to the predicted zone of influence of the Site and their relatively shallow well construction in comparison to other wells in the area), these wells could be deepened to the depth of other wells in the surrounding area to restore the water supply. In the event of a water well complaint there is an established procedure that the licensee must follow which requires an immediate investigation and supply of temporary water if required.

As well, it has been confirmed that the proposed Caledon Pit / Quarry is within the Credit Valley Source Protection Area but is not located in a wellhead protection area (WHPA) or an intake protection zone (IPZ) and there will be no impacts to municipal water supplies.

The Water Report Level 1/2 confirms that the application includes detailed monitoring and reporting requirements to ensure ongoing verification that adjacent sensitive groundwater features and sensitive surface water features will be protected, improved or restored. With the implementation of the recommendations in the report, sensitive surface water features and sensitive groundwater features will be protected, improved and restored during operations. As well, it is confirmed that taking into account rehabilitation, there will be a long term enhancement to the water resources system and features.

Additional discussion related to water and potential impacts and opportunities for the proposal in the context of provincial, regional and local policy is contained in the Planning Justification Report and in the Water Report Level 1/2.

2.6 Blast Design Report, where proposing a quarry that will be blasting (subject to specified criteria)

A Blast Impact Assessment for the Proposed CBM Caledon Pit / Quarry has been prepared by Golder Associates Ltd. (December 2022). The report concludes that with the implementation of the recommendations contained in the report, the Site will be operated in accordance with the current quarry blasting guidelines published by the MECP (NPC-119) at all surrounding sensitive land uses. As well, it is confirmed that the Site has been designed to minimize and mitigate to acceptable levels any potential adverse effects from blasting in accordance with provincial guidelines, standards and procedures. All blasting and blast monitoring would occur in accordance with the Aggregate Resources Act (Ontario Ministry of Natural Resources and Forestry, 2017) prescribed conditions in order to ensure compliance with the provincial guidelines. It is noted that through proper blast design and diligence in inspecting the geology before every blast, flyrock will be maintained within the proposed quarry extraction limits.

Additional discussion related to blasting and potential impacts from the proposal in the context of provincial, regional and local policy is contained in the Planning Justification Report and in the Blast Impact Assessment.

2.7 Noise Assessment Report (for a Class A licence for extraction of more than 20,000 tonnes of aggregate per year)

A Noise Assessment Report has been completed by Golder Associates Ltd. (December 2022). This report established sound level limits according to MECP noise guidelines and compared the predicted noise levels at the identified representative receptors to the established noise limits. The results indicate that, after the implementation of identified noise controls or equivalent measures, the Site will operate in accordance with applicable noise limits as outlined in NPC 300 at all surrounding sensitive land uses, and the Site has been designed to minimize and mitigate to acceptable levels any potential adverse effects from noise in accordance with provincial guidelines, standards and procedures.

Additional discussion related to noise and potential impacts from the proposal in the context of provincial, regional and local policy is contained in the Planning Justification Report and in the Noise Assessment Report.

APPENDIX B:

Draft Official Plan Amendment

AMENDMENT NO. XX
TO THE OFFICIAL PLAN FOR
THE TOWN OF CALEDON PLANNING AREA

The CORPORATION OF THE TOWN OF CALEDON

By-Law No. 202X-XX

A by-law to adopt Amendment No. XXX
to the Official Plan for the Town of Caledon.

WHEREAS the Council of the Corporation of the Town of Caledon, in accordance with the provisions of the Planning Act, R.S.O. 1990, as amended, HEREBY ENACTS AS FOLLOWS:

1. Amendment No. XXX to the Official Plan for the Town of Caledon Planning Area shall be and is hereby adopted.

Enacted by the Town of Caledon Council this _____ day of _____, 202X

Mayor

Town Clerk

THE CONSTITUTIONAL STATEMENT

- PART A - THE PREAMBLE - does not constitute part of this Amendment
- PART B - THE AMENDMENT - consisting of the following text and Schedule 'A' constitutes Amendment No. XXX to the Official Plan for the Town of Caledon.

AMENDMENT NO. XXX

TO THE

TOWN OF CALEDON OFFICIAL PLAN

PART A – THE PREAMBLE

Purpose of the Amendment:

The purpose of this Amendment is to amend Schedule ‘A’ Land Use Plan of the Town of Caledon Official Plan by redesignating the lands subject to this Amendment from “General Agricultural Area”, “Rural Lands” and “Environmental Policy Area” to “Extractive Industrial B Area” and “Environmental Policy Area” to permit the development of a below water mineral aggregate extraction operation and to refine the boundaries of the environmental protection area.

Location:

The lands subject to the Amendment are indicated on the attached Schedule “A” and comprise an area of approximately 262 hectares and are legally described as Part of Lots 15-18, Concession 4 WSCR and Part of Lot 16, Concession 3 WSCR (former Geographic Township of Caledon). The lands are located at the northwest, northeast and southwest intersection of Regional Road 24 (Charleston Sideroad) and Regional Road 136 (Main Street).

Basis:

The basis for this Amendment is contained in staff Report [REDACTED], as adopted by the Planning and Development Committee on [REDACTED] and ratified by Council on [REDACTED]. This application for Amendment to the Town of Caledon Official Plan was made in December 2022 to redesignate the Subject Site from “General Agricultural Area”, “Rural Lands” and “Environmental Policy Area” to “Extractive Industrial B Area” and “Environmental Policy Area”. This redesignation is required to permit the proposed CBM Caledon Pit / Quarry, which will be new a Pit and Quarry Below Water Operation.

The lands subject to this Amendment are located within the Region of Peel’s High Potential Mineral Aggregate Resource Area (HPMARA) and within the Town of Caledon’s High Potential Mineral Aggregate Resource Area (CHPMARA). The Region of Peel Official Plan’s HPMARA generally identifies lands that include primary and secondary sand and gravel resource areas and bedrock resources located in the Region that are not constrained by significant natural heritage features, Plans of Subdivision, and approved settlement areas. The CHPMARA schedule also identifies high potential mineral aggregate resource deposits for protection for possible future extraction. CHPMARA consist of areas of earth materials including sand, gravel, shale, dolostone, and sandstone as identified generally and categorized in the Aggregate Resources Inventory of the Region of Peel. The proposed development of a below water pit / quarry on the subject property is consistent with the overall goals, objectives and

policies of the Caledon Official Plan, including protecting and providing for the use of mineral aggregates and balancing that with other goals of the Town, recognizing the mineral aggregate resource industry as an important component to the Town's economic base, and identifying and protecting for possible use to make as much of the resource as is realistically possible available for use.

New (below water) aggregate operations, such as the CBM Caledon Pit / Quarry, require a Town of Caledon Official Plan Amendment to redesignate the lands to "Extractive Industrial B Area".

The applicant has submitted Official Plan Amendment and Zoning By-Law Amendment applications, as well as a Class 'A' Licence for Below Water Pit / Quarry extraction to the MNRF. The submissions included various technical studies in support of the proposed applications. The applications have been circulated to internal departments and external agencies and have been the subject of multiple open houses and a formal Public Meeting pursuant to the Planning Act that was held [REDACTED]. Planning staff have reviewed this application and are of the opinion that the proposed amendment is consistent with the Provincial Policy Statement, and conforms to the policies of the Growth Plan, the Greenbelt Plan, the Region of Peel Official Plan and the Town of Caledon Official Plan.

PART B – THE AMENDMENT

This part of the document entitled “Part B – The Amendment” and consisting of the following text and Schedule constitutes Amendment No. **XXX** to the Official Plan for the Town of Caledon.

Details of the Amendment:

The Town of Caledon Official Plan is amended as follows:

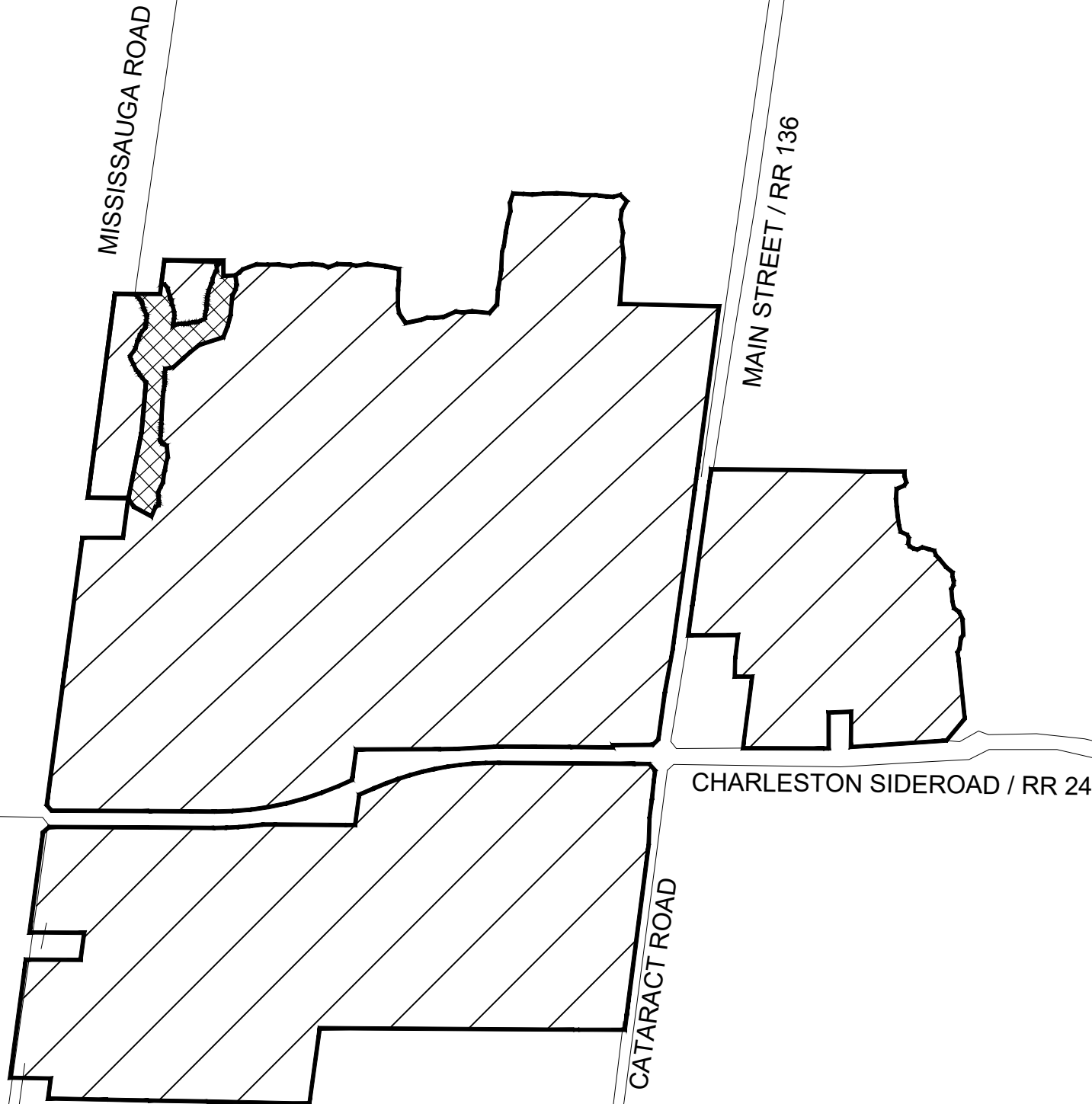
1. “Schedule A” Land Use Plan of the Town of Caledon Official Plan shall be amended for the lands legally described as Part of Lots 15-18, Concession 4 WSCR and Part of Lot 16, Concession 3 WSCR (former Geographic Township of Caledon) and generally located at the northwest, northeast and southwest intersection of Regional Road 24 (Charleston Sideroad) and Regional Road 136 (Main Street) in the Town of Caledon from “General Agricultural Area”, “Rural Lands” and “Environmental Policy Area” to “Extractive Industrial B Area” and “Environmental Policy Area” in accordance with Schedule ‘A’ attached hereto.

Implementation and Interpretation

The implementation and interpretation of this Amendment shall be in accordance with the policies of the Town of Caledon Official Plan.

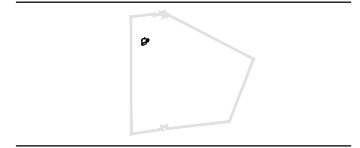


SCHEDULE A OPA No. XX



- Subject Lands
- Lands To Be Designated Extractive Industrial
- Lands to be Designated Environmental Policy Area

PART OF LOTS 15-18, CONC. 4,
WSCR AND
PART OF LOT 16, CONC. 3, WSCR
(FORMER GEOGRAPHIC
TOWNSHIP OF CALEDON),
TOWN OF CALEDON, REGION OF
PEEL



APPENDIX C:

Draft Implementing Zoning By-Law

**THE CORPORATION OF THE TOWN OF CALEDON
BY-LAW NO. 202X-xxx**

Being a by-law to amend Comprehensive Zoning By-law 2006-50, as amended with respect to Part of Lots 15-18, Concession 4 WSCR and Part of Lot 16, Concession 3 WSCR (former Geographic Township of Caledon), Town of Caledon, Regional Municipality of Peel.

WHEREAS Section 34 of the Planning Act, as amended, permits the councils of local municipalities to pass zoning by-laws for prohibiting the use of land or the erecting, locating or using of buildings or structures for or except for such purposes as may be set out in the by-law;

AND WHEREAS the Council of The Corporation of the Town of Caledon considers it desirable to pass a zoning by-law to permit the use of Part of Lots 15-18, Concession 4 WSCR and Part of Lot 16, Concession 3 WSCR (former Geographic Township of Caledon) for a Below Water Pit and Quarry;

NOW THEREFORE the Council of The Corporation of the Town of Caledon enacts that By-law 2006-50, as amended, being the Comprehensive Zoning By-law for the Town of Caledon, shall be and is hereby amended as follows:

1.0 THAT AT Schedule A to Comprehensive Zoning By-law 2006-50 is hereby amended by changing the existing “Agricultural” (A1) and “Environmental Protection Area 2” (EPA2) to “Extractive Industrial - Special” (MX-YY) and “EPA1-487” (Environmental Policy Area 1 – 487) as shown on Schedule A; and

3.0 THAT the following is added to Table 13.1:

Zone Prefix	Exception Number	Additional Permitted Uses	
Extractive Industrial (MX) Zone	YY <i>(# to be provided by Planning Staff)</i>	<ul style="list-style-type: none"> - <i>drilling/ blasting/ extraction</i> - <i>processing & shipping of aggregate</i> - <i>site preparation with respect to stripping,</i> - <i>berm creation and progressive rehabilitation</i> 	<p><u>DEFINITION:</u></p> <p>For the purposes of this By-Law, the contiguous parcels of land/lots within the Main Area (north of Charleston Sideroad, West of Mian Street), shall be considered consolidated as one 'lot', and the internal lot lines of the original lots shall not be construed to be lot lines for the purposes of any zoning regulations.</p> <p>For the purposes of this By-Law, the contiguous parcels of land/lots within the North Area (north of Charleston Sdrd. and east of Main Street), shall be considered consolidated as one 'lot', and the internal lot lines of the original lots shall not be</p>

Zone Prefix	Exception Number	Additional Permitted Uses	
			<p>construed to be lot lines for the purposes of any zoning regulations.</p> <p>For the purposes of this By-Law, the contiguous parcels of land/lots within the South Area (south of Charleston Sdrd., east of Mississauga Road) shall be considered consolidated as one 'lot', and the internal lot lines of the original lots shall not be construed to be lot lines for the purposes of any zoning regulations.</p> <p><u>REGULATIONS:</u></p> <p>Building Area (Maximum) = 2,050 sq.m.</p>

4.0 Schedule "A", Zone Maps 64, 74 and 75 of By-law 2006-50, as amended, are further amended for Part of Lots 15-18, Concession 4 WSCR and Part of Lot 16, Concession 3 WSCR (former Geographic Township of Caledon), Town of Caledon, Regional Municipality of Peel, from "Agricultural" (A1) and "EPA2" to "Extractive Industrial – Special" (MX-YY) and "EPA1-487" (Environmental Policy Area 1 – 487) zone in accordance with Schedule "A" attached hereto.

Read three times and finally passed in open Council on the XX day of XXXXXX, 20XX.

, Mayor

, Town Clerk

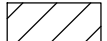

SCHEDULE "A"

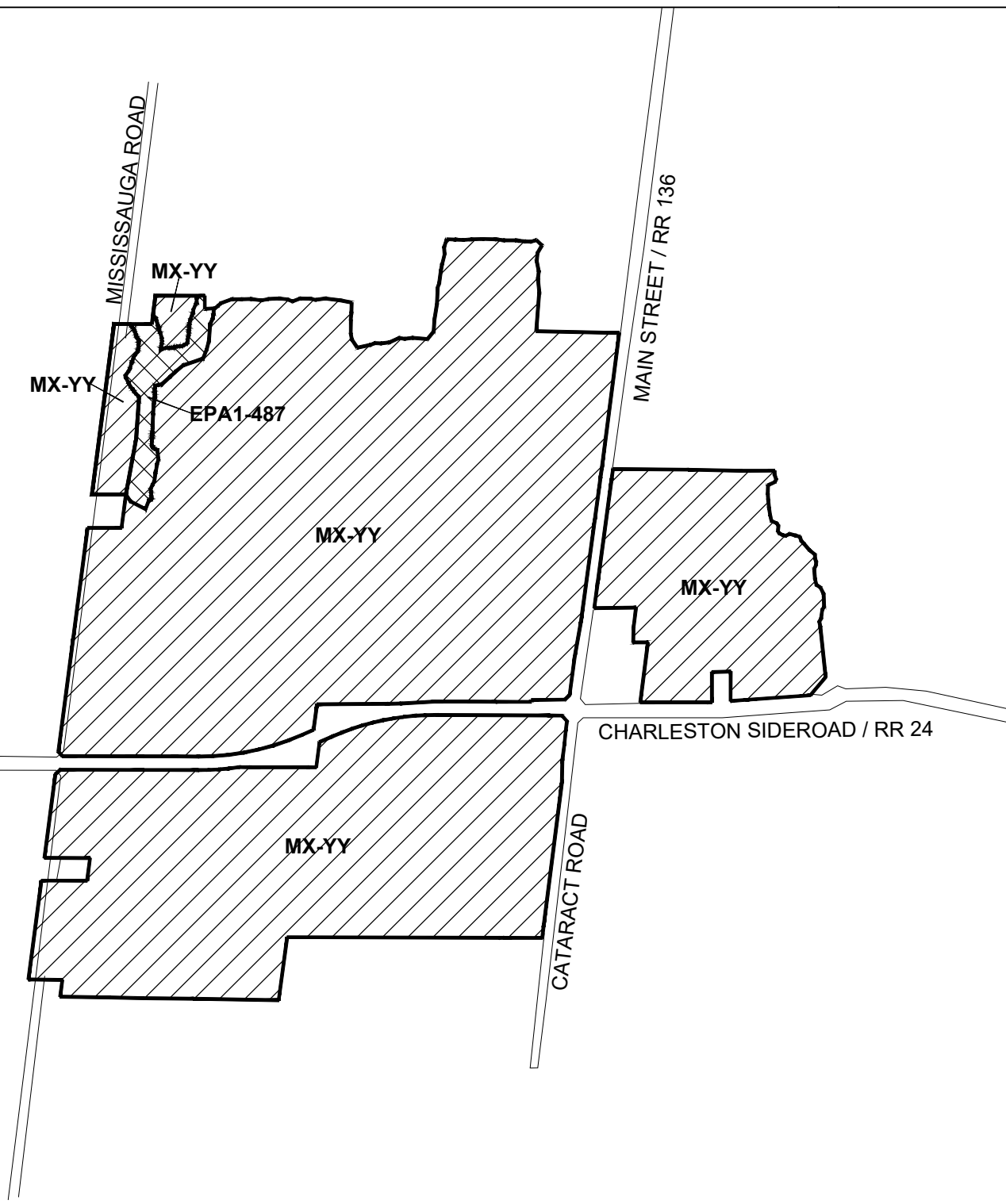
ZONING BY-LAW

No. 2023-XX

CBM AGGREGATES (CBM), A DIVISION OF ST.MARYS CEMENT INC. (CANADA).
 PART OF LOTS 15-18, CONC. 4, WSCR AND
 PART OF LOT 16, CONC. 3, WSCR
 (FORMER GEOGRAPHIC TOWNSHIP OF CALEDON),
 TOWN OF CALEDON, REGION OF PEEL

LEGEND
 SCHEDULE A TO ZONING BY-LAW NO. _____ TO
 REZONE LANDS FROM EXISTING "AGRICULTURAL" (A1)
 AND "ENVIRONMENTAL POLICY AREA 2" (EPA2) ZONES TO
 "EXTRACTIVE INDUSTRIAL - SPECIAL" (MX-YY) ZONE
 AND
 "ENVIRONMENTAL POLICY AREA 1-487" (EPA1-487)

-  **MX-YY ZONE**
-  **EPA1-487 ZONE**



DRAWN BY: GSAI	FILE NO:
CHECKED BY:	DATE: 06/12/22
SCALE: 1:16000	REVISED:
PLANNING & DEVELOPMENT DEPARTMENT	

APPENDIX D: Compiled Terms of Reference For Technical Studies



MEMORANDUM

To: Hashim Ali Hamdani, Region of Peel
Kamran Yousaf, Ministry of Transportation of Ontario
Arash Olia, Town of Caledon

From: T.Y. Lin International Canada Inc.

Date: August 25, 2022

Re: Terms of Reference (UPDATED), Haul Route Assessment and Transportation Impact Study, Caledon Quarry Project

Introduction

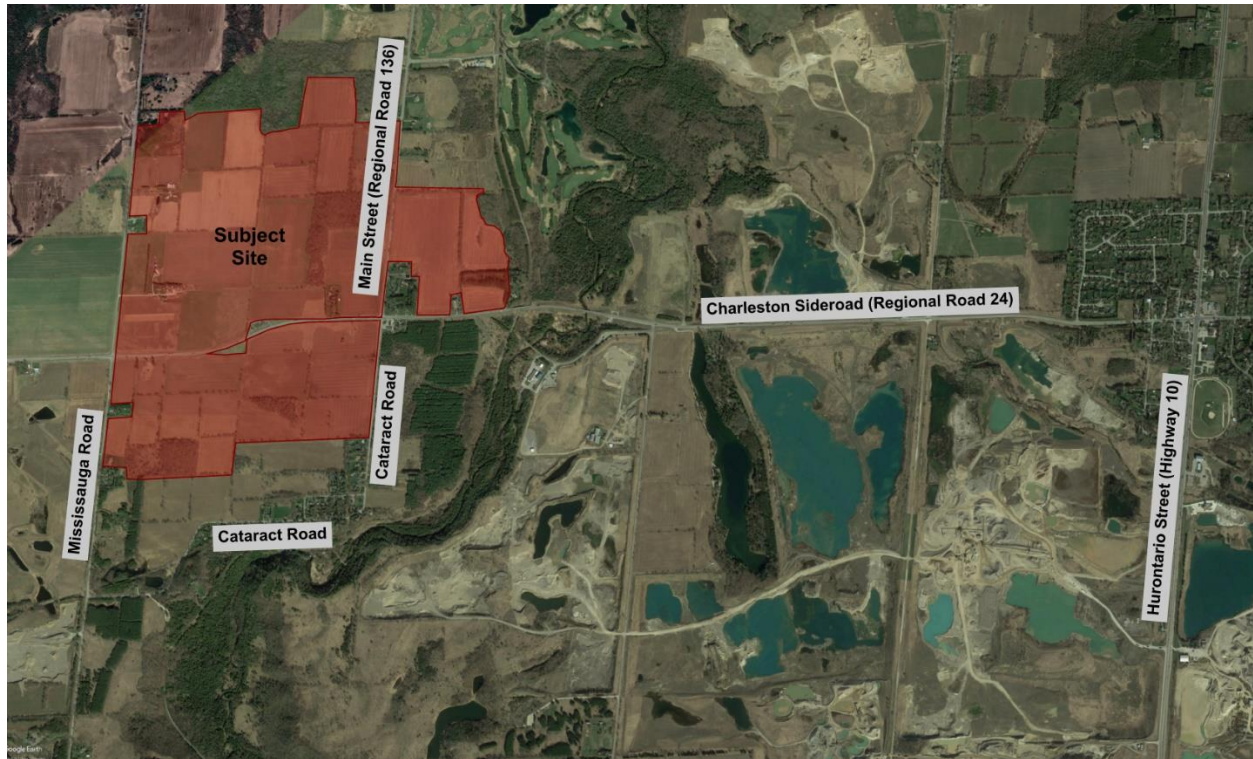
T.Y. Lin International Canada Inc. (TYLin) is pleased to present this Updated Terms of Reference describing the proposed work program for the Haul Route Assessment and Transportation Impact Study to be prepared in support of the proposed CBM Aggregates, a division of St. Marys Cement Inc. (Canada) (CBM) Caledon Quarry project in the Town of Caledon.

The below is provided for review, discussion, and comment. The final version provide herein has been updated to reflect comments received from the Town of Caledon, Region of Peel and the Ministry of Transportation of Ontario (MTO) to confirm the methods and procedures for our transportation assessment in support of the proposed Caledon Quarry Licensing. The acceptance of this work plan by the reviewing agencies is provided in **Attachment 1**.

Proposed Terms of Reference

TYLin was retained by CBM Aggregates, a division of St. Marys Cement Inc. (Canada) (CBM), to assist with the licence application for lands located near Charleston Sideroad (Peel Regional Road 24), Mississauga Road, and Main Street in the Town of Caledon. A figure illustrating the site location is shown in attached **Figure 1**.

Figure 1 – Site Location



This study will provide an assessment of the application taking into consideration the applicable in-effect policies contained in the relevant Provincial Plans, Region of Peel Official Plan and Town of Caledon Official Plan.

Furthermore, where relevant, this study shall be shared with other technical experts completing studies for the application to avoid internal inconsistencies.

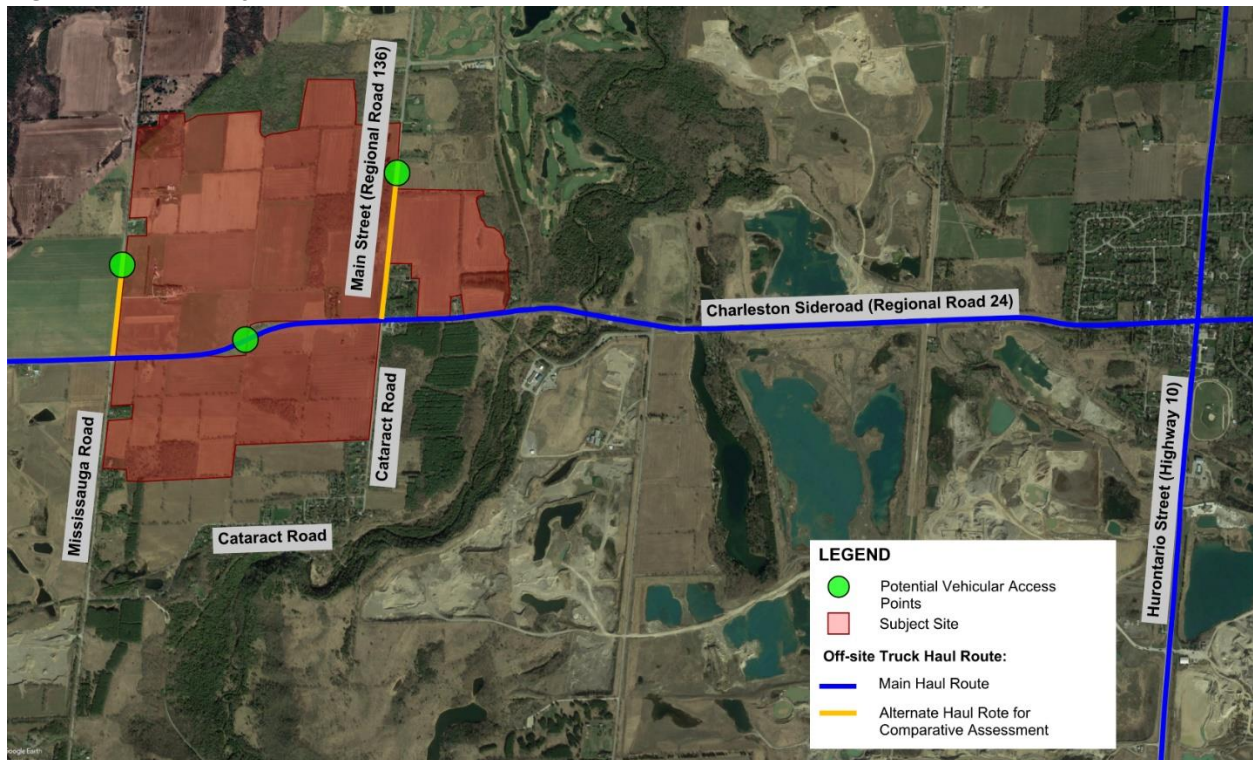
In order to properly scope this project, we present the following scope of work for the fulsome study, which has been updated as per previously received comments from the Town of Caledon, Region of Peel, and MTO.

1. *Traffic Impact Study to be prepared in accordance with Region and MTO traffic impact study guidelines and clearly present the methodologies, information, assumptions and conclusions to the reviewing agencies.*
2. *Collect road inventory information about the study area road network. Due to the established hauling activities in the area, our study will be focused on the intersections of Charleston Sideroad with Hurontario Street (Highway 10), Main Street (Regional Road 136), and Mississauga Road, as well as future site access. Data will be collected for three weekdays*



- during the construction season and a Saturday to understand the current traffic patterns in the area. The counts will be conducted to include the proposed operating hours of the quarry.*
- 3. MTO recommends utilizing the provided turning movement counts (2018) and signal timing plan at Highway 10 intersection with Regional Road 24 (Charleston Sideroad).*
 - 4. Obtain the most recent available TMCs and/or average annual daily traffic (AADT) from Region staff to undertake a comparative analysis of data collected in Task 2.*
 - 5. The collected counts will be used to create a baseline for AM, PM, and weekend peak hour traffic operations.*
 - 6. Obtain from the Town and Region land use and traffic generation information for any relevant nearby proposed developments, and any potential/committed future road or intersection improvements, that will be on-stream within the development horizon of the proposed Caledon Quarry site. This information will inform the 'future background' traffic condition against which to measure site traffic impacts.*
 - 7. Obtain the most recent traffic signal timing parameters at the signalized study intersections.*
 - 8. Create a traffic operations model (using Synchro/SimTraffic v.10) to test the effects of the site traffic on the existing and future study area roadway system. It is typical for these types of studies to emulate a horizon of ten years beyond initial opening year (to be confirmed).*
 - 9. Prepare trip generation estimates for the proposed quarry based on standard first principles approach, utilized in many ARA licence applications. This exercise will be based on the future annual extraction licence for the proposed quarry and on the proposed haulage times of the day and days of the week.*
 - 10. Distribute/assign the resultant peak hour trips to the primary/alternate haul route(s) for comparative and detailed operational assessments. Please refer to **Figure 2** for potential vehicular access and main off-site haul route to and from aggregate operation.*

Figure 2 – Primary and Alternate Haul Routes



11. Contact Regional staff to confirm an acceptable annual growth rate applied to planning horizons along the subject Regional Road.
12. Review MTO's published traffic volume data to derive an appropriate growth rate applied to planning horizons along Highway 10.
13. Prepare peak hour operational analyses to investigate and document the impacts of the proposed quarry traffic. This will include a review of intersection turning movement delays, volume to capacity ratios, and vehicular queuing. This will also include recommendations for the proposed site access lane configurations and a conceptual layout for same.
14. Present the effects of the traffic generated by the proposed quarry along with mitigation measures necessary along the haul route(s) to accommodate the additional traffic load, which would include conceptual designs of any roadway modifications in-line with applicable agency standards. Recommendations on traffic control measures at all affected haul route intersections as well as the proposed site access will be included.
15. Identify existing and potential safety issues using collision data information provided by Town or Region and recommend potential mitigation measures.



Thank you in advance for your attention to this matter. We look forward to your comments on the preceding scope of work and the requested information.

Should you have any questions, please do not hesitate to contact us.

Enclosed: Attachment 1 – Agency Correspondence

Michael Dowdall

Director, Traffic | michael.dowdall@tylin.com

Attachment 1

Agency Correspondence

Michael Dowdall

Subject: FW: Transportation Study - Terms of Reference - Input Request

From: Arash Olia <Arash.Olia@caledon.ca>
Sent: Saturday, December 19, 2020 8:22 PM
To: Alycia Gruchalla <AGruchalla@tmig.ca>
Cc: Michael Dowdall <MDowdall@tmig.ca>
Subject: RE: Transportation Study - Terms of Reference - Input Request

Hi Alycia,

Based on the terms of reference for the TIS, the subject application is located on Charleston Sideroad between Mississauga Road and Main Street (RR 136). Since Charleston Sideroad is a regional road, and the other intersections mentioned in the TIS are either regional or MTO highways (with the possible exception of Cataract Road and any proposed internal roads) review of the TIS ToR's should primarily be addressed by the Region of Peel.

Regarding first principals vs ITE guidelines for trip generation, note the following, I would recommend to take a conservative approach regarding trip generation and use whatever methodology would result in the higher trip generation numbers.

Regards,

Arash Olia, P.Eng., Ph.D.

Manager, Transportation Engineering
Engineering Services Department

Office: 905.584.2272 x.4073
Cell: 416.452.7091
Email: arash.olia@caledon.ca

Town of Caledon | www.caledon.ca | www.visitcaledon.ca | Follow us @YourCaledon

From: Alycia Gruchalla <agruchalla@tmig.ca>
Sent: Thursday, December 17, 2020 3:03 PM
To: Arash Olia <Arash.Olia@caledon.ca>
Cc: Michael Dowdall <mdowdall@tmig.ca>
Subject: Transportation Study - Terms of Reference - Input Request

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the contents to be safe.

Hello Arash,

TMIG has been retained to perform a haul route assessment and transportation impact study in support of the proposed CBM Aggregates, a division of St. Marys Cement Inc., Caledon Quarry project in the Town of Caledon.

Michael Dowdall

From: Khan, Ayesha <ayesha.khan@peelregion.ca>
Sent: Friday, January 15, 2021 9:20 AM
To: Alycia Gruchalla
Cc: Michael Dowdall; Hamdani, Hashim
Subject: RE: Transportation Study - Terms of Reference - Input Request

Good morning Alycia,

We've reviewed your terms of reference submitted in support of the Caledon Quarry Project and wish to offer the following comments:

- We are satisfied with the study area scope/road network;
- We are satisfied with the horizon of 10 years post full build-out for the analyses;
- Please contact [Transportation](#) to confirm [growth rates](#) along the subject Regional road(s).
- Please contact Damian Jamroz (damian.jamroz@peelregion.ca), Supervisor of Traffic Operations to obtain the most recent TMCs and/or average annual daily traffic (AADT).
- Please contact Rick Laing (rick.laing@peelregion.ca), Supervisor of Traffic Signals and Streetlighting, to obtain traffic signal timing parameters and ensure that the information includes the appropriate walk/don't walk splits, recall modes and offsets.
- Please contact [Development Services Planning](#) staff to obtain details on surrounding developments in the area that would affect traffic capacity in the planning horizon year(s)
- Please see the following link for further details on our website for the preferred general layout and requirements of the TIS - <https://www.peelregion.ca/pw/transportation/business/traffic-impact-study.asp>

Feel free to reach out to me if you have any further questions.

Thank you,

Ayesha Khan

Technical Analyst, Traffic Development & Permits
Traffic Engineering
Region of Peel
10 Peel Centre Drive, Suite B, 4th Floor
Brampton, ON L6T 4B9
(905) 791 - 7800 ext. **7909**



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From: Alycia Gruchalla <AGruchalla@tmig.ca>
Sent: January 5, 2021 2:22 PM
To: Khan, Ayesha <ayesha.khan@peelregion.ca>
Cc: Carrick, Sean <sean.carrick@peelregion.ca>; Michael Dowdall <MDowdall@tmig.ca>
Subject: Transportation Study - Terms of Reference - Input Request

Michael Dowdall

From: Yousaf, Kamran (MTO) <Kamran.Yousaf@ontario.ca>
Sent: Friday, June 25, 2021 5:00 PM
To: Sara Rahman
Cc: Alycia Gruchalla; Aurini, Shawn (MTO); Lau, Wes (MTO); Zivkovic, Branko (MTO); Hakomaki, Eric (MTO)
Subject: RE: Terms of Reference Contact
Attachments: 16470 - 10 & RR24 - 26-09-18.pdf; Signalized_Hwy 10 at RR 24 - Charleston Sideroad - Main St.pdf; General Guidelines for the Preparation of Traffic Impact Studies Feb 2021.pdf

You don't often get email from kamran.yousaf@ontario.ca. [Learn why this is important](#)

Hi Sara,

After review of the draft TIS submitted for the proposed quarry in Caledon, MTO would recommend the following:

Since Highway 10 and RR24 intersection is mentioned in the analysis of the study, MTO recommends utilizing the following documents listed in preparation of the TIS:

- Ministry's TIS guideline;
- Ministry's TMC from 2018;
- Ministry's signal timing plan at Hwy 10/RR24 intersection.
- Published traffic volume
data: <https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/tvSplash.aspx>

All documents have been attached for your reference.

Thank you,
Kamran Yousaf

From: Sara Rahman <SRahman@tmig.ca>
Sent: June 24, 2021 12:22 PM
To: Yousaf, Kamran (MTO) <Kamran.Yousaf@ontario.ca>
Cc: Alycia Gruchalla <AGruchalla@tmig.ca>; Aurini, Shawn (MTO) <Shawn.Aurini@ontario.ca>
Subject: RE: Terms of Reference Contact

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Hi Kamran,

I am following up on my previous email about the proposed terms of reference for the new Caledon Quarry project (please see attached). I wanted to confirm if you had any questions or comments about the proposed scope of work.

Thanks,

Sara Rahman
TMIG | TYLI
+1.905.738.5700 x261 | c: +1.403.862.8438

TECHNIAL MEMORANDUM

Date: August 18, 2022
Client Project No.: 19129150
To: David Hanratty, P.Geo., CBM Aggregates
CC: Jennifer Deleemans, Mike Lebreton
From: Sean Colville
Email: Sean@colvilleconsultinginc.ca
Re: Proposed CBM Caledon Quarry Terms of Reference – Agricultural Impact Assessment

Colville Consulting Inc. (Colville) has been retained by Golder Associates Ltd., on behalf of CBM Aggregates (CBM), a division of St. Marys Cement Inc. (Canada) to complete an Agricultural Impact Assessment (AIA). The Greenbelt Plan (2017) defines an AIA as: A study that evaluates the potential impacts of non-agricultural development on agricultural operations and the Agricultural System and recommends ways to avoid or, if avoidance is not possible, minimize and mitigate adverse impacts.

The AIA is just one of several technical studies to accompany an application to the Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNR) for a new Class A Quarry Below Water licence under the *Aggregate Resources Act* (ARA). This AIA is also being undertaken as part of Planning Act approval and Town of Caledon Official Plan and Zoning By-law amendments. The properties to be licensed are located on Charleston Sideroad and Mississauga Road, Town of Caledon, Region of Peel, Ontario (the site). The site, henceforth referred to as the Subject Lands is approximately 262.4 ha in size (Figure 1) and is the preliminary area of investigation subject to an ARA Licence application. The total area of land in CBM's interest and subject to various applications is approximately 324 ha in size.

This Terms of Reference (TOR) includes a summary of the assessment and deliverables associated with the Agricultural Impact Assessment. Where relevant, the AIA shall be shared with other technical experts completing studies for the application to avoid internal inconsistencies.

AGGREGATE EXTRACTION POLICIES

Land Use Policy and development in the province of Ontario is directed by the Provincial Policy Statement (PPS), which was issued under the authority of Section 3 of the Planning Act and which came into effect on May 1, 2020. Section 3 of the Planning Act states that decisions affecting planning matters “shall be consistent with” policy statements issued under the Act.

Section 3 of the *Planning Act* states that decisions affecting planning matters “shall be consistent with” policy statements issued under the Act. Section 2.3 of the PPS deals specifically with agricultural policy. Section 2.3.1 states that “Prime agricultural areas shall be protected for long-term use for agriculture”. The PPS defines prime agricultural areas as, “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.”



Figure 1
Location of Subject Lands

Agricultural Impact Assessment for
CBM Caledon Quarry

Prepared for:  **CBM Aggregates**

Prepared by: 

DATE: December 2021
Revised: August 2022

FILE: C19065

The Province of Ontario recognizes the importance of the mineral aggregate industry and the need to balance these resources with agricultural resources. The PPS in Section 2.5.4.1 States that:

“In prime agricultural areas, on prime agricultural land, extraction of mineral aggregate resources is permitted as an interim use provided that the site will be rehabilitated back to an agricultural condition.

Complete rehabilitation to an agricultural condition is not required if:

- a) outside of a specialty crop area, there is a substantial quantity of mineral aggregate resources below the water table warranting extraction, or the depth of planned extraction in a quarry makes restoration of pre-extraction agricultural capability unfeasible;
- b) in a specialty crop area, there is a substantial quantity of high-quality mineral aggregate resources below the water table warranting extraction, and the depth of planned extraction makes restoration of pre-extraction agricultural capability unfeasible;
- c) other alternatives have been considered by the applicant and found unsuitable. The consideration of other alternatives shall include resources in areas of Canada Land Inventory Class 4 through 7 lands, resources on lands identified as designated growth areas, and resources on prime agricultural lands where rehabilitation is feasible. Where no other alternatives are found, prime agricultural lands shall be protected in this order of priority: specialty crop areas, Canada Land Inventory Class 1, 2 and 3 lands; and
- d) agricultural rehabilitation in remaining areas is maximized.”

The licence application being prepared is for extraction below the water table and therefore, it is understood that an agricultural rehabilitation plan for the Subject Lands will not be required. It is our understanding that some areas within the Subject Lands are excluded from the extraction area, and the quarry may be allowed to flood after extraction activities are complete. This would eventually result in the formation of a lake. Rehabilitation measures to restore the lands to an agricultural condition would not be feasible under this scenario.

To assess the level of impact on the agricultural land base, the regional soils mapping and the provincial soil resource database will be used to identify soil series type and interpret the agricultural capability of the Subject Lands and surrounding area. Site specific soil sampling to obtain baseline conditions (soil morphological and nutrient information) as recommended in the draft Agricultural Impact Assessment Guidance Document is not required for Class A Quarry Below Water licence applications as the lands will not be rehabilitated to an agricultural condition.

The agricultural impact assessment will address Section 2.5.4.1 c) to demonstrate that other alternatives have been considered and a preferred location identified. In addition, the PPS in Section 2.3.6.2 states that “Impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands are to be mitigated to the extent feasible.”

Greenbelt Plan (2017)

Section 4.3.2 of the Greenbelt Plan identifies policies related to Non-Renewable Resources. The Subject Lands are located within the Protected Countryside and are therefore required to address policy 4.3.2.4 which states:

“In prime agricultural areas, applications for new mineral aggregate operations shall be supported by an agricultural impact assessment and, where possible, shall seek to maintain or improve connectivity of the Agricultural System.”

The agricultural impact assessment will address policy 4.3.2.4 to demonstrate that impacts to the connectivity of the Agricultural System are minimized to the extent possible.

Region of Peel and Town of Caledon Official Plans

Although the provincial policies and plans are expressions of the provincial interest in aggregate resource areas and operations, it is important that the Studies associated with the ARA license application balance the Caledon and Peel interests and requirements as expressed in the Official Plans that are to be in effect at the time when the Planning Act and the ARA applications are formally submitted by CBM. This includes the Town of Caledon Official Plan policies regarding the implementation of Rehabilitation Master Plans.

This study will provide an assessment of the application taking into consideration the applicable in-effect policies contained in the relevant Provincial Plans, Region of Peel Official Plan and Town of Caledon Official Plan.

Agricultural Impact Assessment Guidelines

The Draft Agricultural Impact Assessment (AIA) Guidance Document (March 2018) prepared by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) provides guidance on how to prepare an agricultural impact assessment and guidelines for progressive agricultural rehabilitation in prime agricultural areas. Since the proposed application is for below water table extraction agricultural rehabilitation will not be feasible. OMAFRA was contacted to confirm that the collection of baseline soil conditions and the preparation of a rehabilitation plan are not required for below water extraction applications and do not need to be considered as part of the AIA.

To be consistent with other components of the Guidance Document, the AIA will include:

- ♦ a statement of study purpose and objectives;
- ♦ a description of the proposed aggregate extraction operation;
- ♦ a description of and rationale for the study area being evaluated;
- ♦ outlining the regulatory framework (provincial and municipal) and explain why the AIA is required;
- ♦ identifying the applicable land use designations within the study area and Subject Lands;
- ♦ the methodology used including a description of the background information collected and review and the field inventories completed;
- ♦ A description of agricultural resources, including resources such as the site’s physiography and the soil and CLI capability classes; and

- ♦ Identifying and describing the mix of land uses and the types of farm operations and agricultural practices, informed by local farm landowners where possible.

Once this information is collected the lands will be evaluated in terms of their potential agricultural productivity and the agricultural priority. Potential impacts of the proposed quarry will be identified and where impacts cannot be avoided, mitigation measures will be developed to minimize negative effects to the extent possible. Where avoidance is not possible or practical, measures that minimize the extent and severity of the impacts will be recommended and net impacts will then be addressed.

STUDY AREA

To be consistent with the draft Agricultural Impact Assessment Guidance Document, the AIA will identify a Primary and Secondary Study Area. The Primary Study area will be the Subject Lands (licenced limits). The Secondary Study area will include all lands within a 1 km radius from the Subject Lands. The secondary study area may extend beyond 1 km radius and include the proposed haul routes. The inclusion of haul routes will be determined as the study proceeds.

METHODS AND APPROACH

To address the requirements of the Draft AIA Guidance Document, a summary of the scope of work to be undertaken has been completed is provided below.

Background Information

One of the first tasks undertaken will be to collect and review all relevant information required to meet the Study objectives. The background review will include at a minimum:

- ♦ a review of the regional soils information for the Subject Lands (provincial digital soil resource database);
- ♦ the A Place to Grow: Growth Plan for the Greater Golden Horseshoe, the Implementation Procedures for the Agricultural System in Ontario's Greater Golden Horseshoe and the draft Agricultural Impact Assessment Guidance Document;
- ♦ a review of the Regional Municipality of Peel and the Town of Caledon's Official Plan policies, land use schedules and the Town's policies regarding the implementation of Rehabilitation Master Plans;
- ♦ a review of the parcel fabric in the Study Area to assess the level of fragmentation of agricultural lands;
- ♦ a review OMAFRA's Agricultural Information Atlas, and Provincial Agricultural Systems Portal to obtain agricultural resources information;
- ♦ a review aerial photography to review the type and extent of agricultural operations on Site and in the surrounding area and to identify potential sources of conflict; and
- ♦ a review of all public consultations undertaken by the proponent.

Field Work

The collected field data will include:

- ♦ A reconnaissance level land use survey to:
 - Verify the background data collected pertaining to agricultural land uses;
 - Identify the mix of land uses in the study areas;

- Identify the type and status (active vs. non-active) of farm operations potentially impacted by proposed aggregate extraction operations;
- Identify farm buildings (including empty livestock and/or retired farm infrastructure) and other key permanent facilities and other components of the agri-food network;
- Neighbouring farm communities; and
- Other aggregate operations.

Impact Analysis

To be consistent with the AIA guidelines (draft), potential negative effects of the proposed aggregate extraction operation will be evaluated through an assessment criteria such as:

- ◆ Interim or permanent loss of agricultural land, including the quality and quantity of farmland lost;
- ◆ Fragmentation of agricultural lands and operations;
- ◆ The type of agricultural, agriculture-related or on-farm diversified uses being lost and the significance this has for supporting other agricultural production in the surrounding area;
- ◆ The loss of existing and future farming opportunities;
- ◆ The loss of infrastructure, services or assets important to the surrounding agricultural community and agri-food sector;
- ◆ The loss of agricultural investments in structures and land improvements (e.g., artificial drainage);
- ◆ The disruption or loss of function to artificial drainage and irrigation installations;
- ◆ Changes to the soil drainage regime;
- ◆ Changes to surface drainage features which could have an effect on adjacent lands;
- ◆ Changes to landforms, elevations and slope that could alter microclimatic conditions (e.g., modification to slopes that may reduce or improve cold air drainage opportunities and changes to elevation may have an impact on diurnal temperatures);
- ◆ Changes to hydrogeological conditions that could affect neighboring municipal or private wells, sources of irrigation water and sources of water for livestock;
- ◆ Disruption to surrounding farm operations, activities and management (e.g., temporary loss of productive agricultural lands, cultivation, seeding, spraying, harvesting, field access, use of road network);
- ◆ Changes to the connectivity of the Agricultural System;
- ◆ The potential effects of noise, vibration, dust, and traffic on agricultural operations and activities;
- ◆ Potential compatibility concerns such as normal farm practices facing challenges with e.g., nuisance complaints, vandalism and trespassing that may occur with the new development being established;
- ◆ The inability or challenges to move farm vehicles and equipment along roads due to increased traffic caused by haul routes, changes in road design;

- ♦ Review and consideration of findings in other technical studies prepared for the application to understand potential impacts and develop mitigation measures and recommendations; and
- ♦ Other potential impacts identified through public consultation process and our investigations.

Mitigation Measures and Net Impacts

Whenever possible, recommendations to avoid adverse impacts will be provided. Where avoidance is not possible or practical, mitigation measures will be prepared that will minimize or mitigate the potential impacts to the extent feasible. The net impacts of the proposed aggregate operation will then be assessed based on the assumption that the proposed mitigation measures will be put in place.

DELIVERABLES

The report will include data and analysis of study findings and provide recommendations and a study conclusion to minimize potential impacts. This report will contain appendices with the Curriculum Vitae of the qualified study team, as well as all relevant resources and data. The report will be provided in digital format (an Adobe Acrobat PDF file).

CLOSURE

We trust that this technical memorandum meets your current needs. Please contact Colville or CBM with any questions or comments.

Yours sincerely,



Sean Colville B.Sc., P.Ag.

Colville Consulting Inc.

TECHNICAL MEMORANDUM

DATE August 19, 2022

Project No. 19129150

TO David Hanratty, PGeo
CBM Aggregates

CC Jennifer Deleemans, Mike Lebreton

FROM Heather Melcher

EMAIL heather_melcher@golder.com

PROPOSED CBM CALEDON QUARRY TERMS OF REFERENCE – ARCHAEOLOGY AND CULTURAL HERITAGE

Golder Associates Ltd. (Golder) has been retained by CBM Aggregates (CBM), a division of St. Marys Cement Inc. (Canada) to complete archaeological and cultural heritage technical studies to accompany an application to the Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNR) for a new Class A Quarry Below Water licence under the *Aggregate Resources Act* (ARA) (project). These studies will also be used for a Planning Act approval and application for Town of Caledon Official Plan and Zoning By-law amendment. Furthermore, these studies will provide an assessment of the application taking into consideration the applicable in-effect policies contained in the relevant Provincial Plans, Region of Peel Official Plan and Town of Caledon Official Plan. The properties to be licensed are located on Charleston Sideroad and Mississauga Road, Town of Caledon, Region of Peel, Ontario (site). The site is approximately 262.4 hectares (ha) in size (Figure 1).

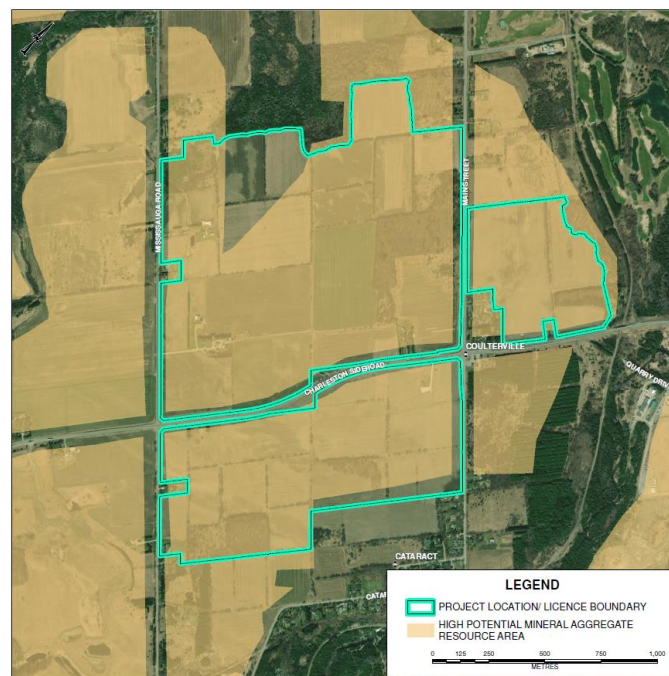


Figure 1: Proposed CBM Caledon Quarry Location

This Terms of Reference (TOR) includes a summary of the assessment and deliverables associated with the archaeology and cultural heritage components. Where relevant, these studies shall be shared with other technical experts completing studies for the application to avoid internal inconsistencies.

1.0 ARCHAEOLOGY

Golder will undertake a work program for the Stage 1 and 2 Archaeological Assessments on the site, which will be the preliminary license boundary as shown in Figure 1. The site consists primarily of open cultivated fields, uncultivated land including overgrown farmland and farmstead/residential areas, and wooded areas.

The objectives of the Stage 1 and 2 Archaeological Assessments are to evaluate the archaeological potential of the site, identify archaeological resources that may be present, and provide information from which to make recommendations regarding the need for additional archaeological work (Stage 3) for identified archaeological sites. The Stage 1 and 2 assessments will be undertaken in compliance with the requirements of the Ministry of Tourism, Culture and Sport's (MTCS) 2011 *Standards and Guidelines for Consultant Archaeologists*.

1.1 Stage 1 Archaeological Assessment

The Stage 1 Archaeological Assessment will include the following tasks as they relate to the site:

- Review of relevant archaeological, historical, and environmental literature.
- Review of an updated listing of archaeological sites from the Ontario Archaeological Sites Database (OASD) within 1 km and any previous archaeological assessments within 50 m.
- Where possible, consultation with individuals knowledgeable about the site.
- Review of topographic maps, historical settlement maps, and archaeological management plans, where available.

1.2 Stage 2 Archaeological Assessment

A Stage 2 Archaeological Assessment is intended to provide an inventory of archaeological sites present within the site. It should be completed as part of the archaeological investigation because the site is in an area of archaeological potential given the proximity of known registered archaeological sites, historical transportation routes, and water sources. Moreover, aerial imagery of the site appears to show significant undisturbed areas with sufficient integrity to contain possible archaeological resources.

Given the nature of the lands within the site, the Stage 2 assessment will consist of a combination of pedestrian survey and shovel test pit survey. It is assumed that the open lands currently being used as cultivated fields can be ploughed and can be assessed by pedestrian survey. Once ploughed, these areas should be systematically walked at 5 metre (m) intervals to map and collect artifacts found on the ground surface, as per the requirements of the MHSTCI. If artifacts are identified, then the survey should be intensified at 1 m intervals for a minimum of 20 m around the recovered artifact. To facilitate the visual identification of potential archaeological sites during the pedestrian survey, all open agricultural land within the site must be adequately ploughed to achieve a required surface visibility of at least 80%. This is best achieved through the use of a mouldboard plough followed by disc ploughing.

For uncultivated lands within the site (e.g., overgrown areas, grassy areas associated with structures), the Stage 2 assessment will be completed by hand excavating shovel test pits at 5 m intervals. The test pits should meet MHSTCI requirements and be approximately 30 cm in diameter and, where possible, and excavated 5 cm into sterile subsoil. The soil from all test pits should be screened through 6 mm wire mesh to facilitate the recovery of artifacts. Upon discovery of cultural resources, test pit intervals may be reduced to 2.5 m within 5 m of artifact-yielding test pits and one or more 1 m² test units may be excavated to ensure full capture of cultural materials revealed, and to determine whether a recommendation for a Stage 3 Archaeological Assessment is required. All test pits and test units will be backfilled upon completion.

Areas within the site with greater than 20% slope, previous disturbance, and/or are permanently wet may be documented and excluded from the Stage 2 survey as they typically have low to no archaeological potential. Large wooded areas, specifically significant woodlands, on the site can be excluded from Stage 2 survey if they will be outside of the proposed extraction area. These areas should be photo-documented for reporting purposes concurrently with the pedestrian and test pit surveys.

If artifacts are identified during the Stage 2 Archaeological Assessment, then they will be collected, their location recorded using a hand-held GPS, and then be cleaned and catalogued for analysis.

1.3 Stage 3 Archaeological Assessments

Golder will undertake Stage 3 Archaeological Assessment at archaeological sites identified within the project site that meet the criteria outlined by the MHSTCI.

The objectives of each Stage 3 Archaeological Assessment are as follows:

- To determine the extent of the archaeological site and the characteristics of the artifacts;
- To collect a representative sample of artifacts;
- To assess the cultural heritage value or interest of the archaeological site; and,
- To determine the need for mitigation of development impacts (Stage 4) and recommend appropriate strategies for mitigation and future conservation.

The Stage 3 Archaeological Assessment of each identified site will commence with the establishment of a site datum followed by test unit excavation. A Stage 3 controlled surface pick-up (CSP) may not be necessary if an intensified Stage 2 CPS survey meeting MHSTCI requirements is completed as part of the Stage 2 archaeological fieldwork.

The placement of test units at each site will follow excavation strategies outlined in the MHSTCI' *Standards and Guidelines for Consultant Archaeologists*. All Stage 3 test units will be excavated to subsoil, at which time the subsoil will be assessed for signs of cultural features. If signs of cultural features are identified, then they will be drawn, photographed, and covered with geo-textile fabric before being backfilled to protect the features. If no cultural features are identified, then excavation will resume and continue into the first 5 cm of subsoil. All soils excavated from the test units will be screened through hardware cloth with an aperture no larger than 6 mm to facilitate the recovery of artifacts that may be present. Upon completion of Stage 3 activities, the excavated units will be backfilled, and the area returned to grade.

Recovered artifacts will be tagged in the field by their provenience and collected for subsequent washing, cataloguing and analysis.

1.4 Deliverables

A report will be prepared providing the results of the Stage 1 and 2 Archaeological Assessments. The report will have sections outlining purpose, methodology, background research, analysis, conclusions, and recommendations for additional archaeological work (Stage 3) at identified archaeological sites, if required.

Separate Stage 3 Archaeological Assessment reports will be produced for each applicable archaeological site providing the results of the archaeological work. Each Stage 3 report will have sections outlining purpose, methodology, background research, analysis, conclusions, and recommendations as to whether additional archaeological investigation (Stage 4 mitigation) is required.

The final Stage 1 and 2 Archaeological Assessment report and each Stage 3 Archaeological Assessment report must be submitted to the MTCS for acceptance, as per the licensing requirements.

1.5 Indigenous Engagement

Indigenous engagement considers the interest of Indigenous communities in the archaeological assessment, the protection of Indigenous archaeological sites, and the disposition of Indigenous artifacts and ancestral remains. Effective engagement requires good planning and should begin early in a project.

As per archaeology licensing requirements, Indigenous communities must be engaged by a licensed archaeologist during Stage 3 assessments when assessing cultural heritage value or interest of Indigenous archaeological sites and following Stage 3 assessments when formulating a Stage 4 strategy to mitigate impacts to Indigenous archaeological sites through avoidance and protection or excavation.

It is increasingly becoming more common to engage Indigenous communities prior to the Stage 3 assessment with increasing interest from some Indigenous communities to be involved at the Stage 1 and 2 level. Given this, Golder has been working with CBM to contact interested Indigenous communities to invite them to send a Field Liaison Representatives (FLRs) for all archaeological investigations to participate in and/or observe fieldwork, to ensure their interests are considered. Golder will work with CBM to sign agreements for FLR participation, which is customarily between the communities and the proponent, in this case CBM.

2.0 CULTURAL HERITAGE ASSESSMENT

2.1 Cultural Heritage Report

Golder will undertake a work program for a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment (CHR) to identify known and potential built heritage resources and cultural heritage landscapes within the study area, assess the potential impacts of the proposed quarry, and provide mitigation recommendations. The study area for the CHR will be all property parcels within or crossed by the preliminary limit of extraction area within the site (Figure 1) as well as all adjacent properties.

The CHR is based on the MTCS¹ *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* (2016) checklist and *Ontario Heritage Tool Kit: Heritage Resources in the Land Use Planning Process*, as well as recognized conservation manuals such as *Canada's Historic Places Standards and Guidelines for the Conservation of Historic Places in Canada*. The CHR will involve the following tasks:

- Collect Background Data
 - Federal, provincial, and municipal heritage registers and inventories, and historical and topographical maps will be reviewed to identify known and potential built heritage resources and cultural heritage landscapes within the study area. Information will also be gathered from archival and published sources to understand the geographic, historical, and municipal policy context of the study area.
- Engage Stakeholders
 - Golder will contact heritage planning staff at the Town of Caledon for further information on existing conditions in the study area, and to identify any additional requirements, concerns, or issues early in the assessment.
- Undertake Field Investigation
 - A field investigation will be conducted to document known cultural heritage resources and identify potential built heritage resources and cultural heritage landscapes in the study area. All properties will be documented from publicly accessible rights-of-way. The field investigation will be aided by a vegetation plan and topographical mapping to assist in identifying cultural heritage features.
- Evaluate Potential Built Heritage Resources and Cultural Heritage Landscapes
 - Based on the research, engagement and field investigation, each potential built heritage resource and cultural heritage landscape will be identified and assessed at a preliminary level using criteria based upon *Ontario Regulation 9/06 of the Ontario Heritage Act*.
- Compile Inventory of Existing Conditions
 - Based on the collected information, a detailed inventory will be compiled of all known and potential built heritage resources and cultural heritage landscapes in the study area. This inventory will be shared with the Golder visual assessment team for incorporation into the Visual Impact Assessment (VIA) for the Project.
- Assess Impacts
 - The proposed quarry will be assessed at a preliminary level for its potential impact on the identified (known and potential) built heritage resources and cultural heritage landscapes. This assessment will use the examples of direct and indirect impacts provided in the MHTSCI *Ontario Heritage Tool Kit: Heritage Resources in the Land Use Planning Process*.

¹ Note that this ministry is currently named the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI).

■ Recommend Conservation or Mitigation Strategies

- Based on the identified potential impacts, Golder will recommend conservation or mitigation strategies to avoid or reduce adverse effects to the identified (known and potential) built heritage resources and cultural heritage landscapes. This may include recommending property specific Cultural Heritage Evaluation Reports (CHERs) or Heritage Impact Assessments (HIAs). If any CHERs or HIAs are required for the Project, these studies will incorporate the results of other applicable studies completed for the Project (e.g., VIA, blasting/vibration impact assessment).

2.2 Deliverable

A report will be developed providing sections outlining the purpose, methodology, background research, evaluations, impact assessment, conclusions, and recommendations, including figures, as appropriate.

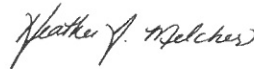
3.0 CLOSURE

We trust that this technical memorandum meets your current needs. Please contact Golder and CBM with any questions or comments.

Golder Associates Ltd.



Michael Teal, MA
Director, Archaeology and Heritage



Heather Melcher, MSc
Director, Ecology

HM/AR/MT/HC/mp/wlw

[https://golderassociates.sharepoint.com/sites/114392/project files/6 deliverables/terms of reference/arch-ch tor/19129150-tm-rev1-cbm caledon quarry archaeology and cultural heritage tor-19aug2022.docx](https://golderassociates.sharepoint.com/sites/114392/project%20files/6%20deliverables/terms%20of%20reference/arch-ch%20tor/19129150-tm-rev1-cbm%20caledon%20quarry%20archaeology%20and%20cultural%20heritage%20tor-19aug2022.docx)

TECHNICAL MEMORANDUM

DATE August 19, 2022

Project No. 19129150

TO David Hanratty, PGeo
CBM Aggregates

CC Jennifer Deleemans, Mike Lebreton

FROM Heather Melcher

EMAIL heather_melcher@golder.com

PROPOSED CBM CALEDON QUARRY TERMS OF REFERENCE – AIR, NOISE AND BLASTING

Golder Associates Ltd. (Golder) has been retained by CBM Aggregates (CBM), a division of St. Marys Cement Inc. (Canada) to complete technical studies to accompany an application to the Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNR) for a new Class A Quarry Below Water licence under the *Aggregate Resources Act* (ARA) (project). These studies will also be used for a Planning Act approval and application for Town of Caledon Official Plan and Zoning By-law amendment. Furthermore, these studies will provide an assessment of the application taking into consideration the applicable in-effect policies contained in the relevant Provincial Plans, Region of Peel Official Plan and Town of Caledon Official Plan. The properties to be licensed are located on Charleston Sideroad and Mississauga Road, Town of Caledon, Region of Peel, Ontario (site). The site is approximately 262.4 hectares (ha) in size (Figure 1).

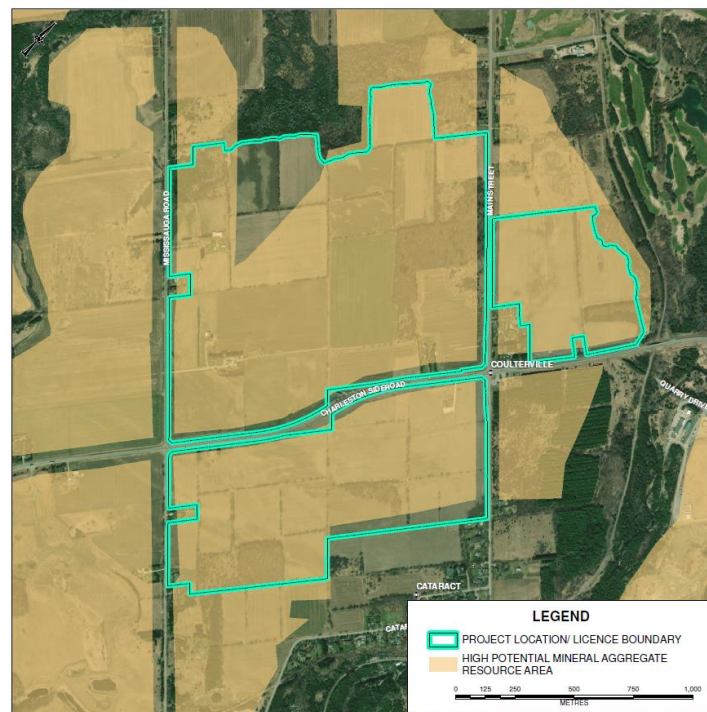


Figure 1: Proposed CBM Caledon Quarry Location

This Terms of Reference (TOR) includes a summary of the assessment and deliverables associated with the air quality, noise, and vibration/blasting components. Where relevant, this study shall be shared with other technical experts completing studies for the application to avoid internal inconsistencies.

1.0 AIR QUALITY

1.1 Air Quality Impact Assessment

As the ARA does not provide specific guidance and standards for air quality assessments, the preparation of a detailed air quality assessment is not typically required for a licence application. However, the preparation of an air quality assessment (including dust) is required per Sec 5.11.2.4.2 the Town of Caledon's Official Plan and will be required as part of the *Planning Act* application for the Project. The air quality assessment will include quantification of baseline air quality, specifically dust, in the vicinity of the site as well as numerical modelling of the proposed operations of the project to determine the change in air quality as well as comparison to provincial/federal standards, guidelines or regulations. This will be completed through four tasks, as described below.

1.1.1 Desktop Baseline Study

Golder will quantify the baseline or existing air quality in the vicinity of the site using publicly available ambient air monitoring data from Environment and Climate Change Canada (ECCC) National Air Pollution Surveillance (NAPS) system and/or information reported to the National Pollutant Release Inventory (NPRI) by facilities located close to the site. These data will be used to prepare a summary of existing local air quality. The locations of the closest NAPS monitoring stations that will be considered to describe background air quality data are located in Brampton (NAPS IDs 60428 and 60450), approximately 30 km southeast of the project and Guelph (NAPS ID 61802), approximately 35 km southwest of the project. Data will be collected for dust as well as products as combustion, including Nitrogen dioxide. These monitoring stations are the closest NAPS monitoring stations to the project but are located in more suburban environments. They are therefore expected to provide a conservative assessment of baseline air quality as they are surrounded by a greater density of residential and commercial emission sources.

1.1.2 Baseline Monitoring

Golder will organize and manage an ambient air quality monitoring program for dust (over a one-year period) to assess the baseline levels of particulate matter in the vicinity of the project prior to operations. There are no significant industrial sources of dust in the immediate area, therefore the station will be sited in a location that is predominantly upwind of the site to help understand the particulate concentrations that are being transported into the local area from long-range sources. Meteorological data taken from the closest Environment and Climate Change Canada meteorological station will be used to establish the prevailing wind direction and the location of closest sensitive receptors in the downwind direction will also reviewed to identify a potential siting area that was upwind of these locations. Consideration was also given to locating the station away from tall trees and buildings which may interfere with local wind flow, in accordance with MECP recommended protocol.

Golder will install one ambient dust continuous monitoring station at the site. Meteorological parameters will also be recorded. The dust monitoring program will include continuous monitoring of Total Suspended Particulate (TSP), Coarse Particulate Matter (PM₁₀), and Fine Particulate Matter (PM_{2.5}). The monitoring station will be

equipped with an Aeroqual Dust Sentry Pro (Dust Sentry Pro) that measures dust and fine particulates (TSP, PM₁₀, and PM_{2.5}) continuously in real-time.

The Dust Sentry Pro is an instrument that delivers simultaneous measurements of dust particulates and reports real-time data in one-minute intervals. Meteorological conditions will also be monitored. The monitoring of meteorological conditions will be completed with a Vaisala WXT536 Weather Transmitter connected directly to the Dust Sentry Pro.

The baseline monitoring data will be used to supplement the data collected from publicly available sources, identified in Section 1.1.1. A comparison of data from all three stations will be provided.

1.1.3 Predictive Modelling

Predictive impacts on air quality from the proposed operations require an estimate of the emissions released into the atmosphere as well as representative local meteorology. Impacts are predicted using an approved regulatory atmospheric dispersion model to provide estimates of contaminant concentrations at various receptors around the project. These estimates will be combined with baseline data to provide a cumulative impact of the operations which can be compared to various regulatory standards, guidelines, and objectives. Generally, air quality modelling results are compared to provincial and/or federal Ambient Air Quality Criteria.

Golder will prepare emission estimates of indicator compounds during project operations. This includes consideration of the 1-hour, 24-hour, and annual operating scenarios that the project may be subject to. The relevant indicator compounds will include the following:

- Carbon monoxide (CO)
- Nitrogen oxides, expressed as nitrogen dioxide (NO₂)
- Suspended particulate matter¹ (SPM)
- PM₁₀
- PM_{2.5}
- Respirable Crystalline Silica.

The emission estimates for all indicator compounds will be used to complete atmospheric dispersion modelling for the following scenarios:

- Effects of the project operations only.
- Cumulative effects of the project in addition to baseline ambient air quality.

Modelling will be used to estimate predicted concentrations at sensitive receptor locations within 1 km of the proposed licence area. All dispersion modelling will be completed using the US EPA AERMOD dispersion model and carried out in accordance with the Ministry of the Environment, Conservation and Parks (MECP) “Air

¹ SPM can also be referred to as total suspended particulate or TSP

Dispersion Modelling Guideline for Ontario – Version 3.0 dated March 2017. Golder will use a 5-year hourly meteorological data set from the MECP.

1.1.4 Impact Assessment and Reporting

Time-averaged concentrations of all indicator compounds will be predicted at identified sensitive receptors with results compared to provincial and/or federal ambient air quality standards, guidelines and/or criteria. If necessary, Golder will identify proposed mitigation measures to reduce the potential for nuisance as a result of the project. The results of the air quality impact assessment will be documented in a report. The report will provide a detailed description of the methodology and results including the calculations and modelling.

1.2 Fugitive Dust Best Management Practices Plan and Follow Up Monitoring

Golder will use the results of the air quality impact assessment and recommended mitigation measures to prepare a comprehensive fugitive dust Best Management Practices plan (BMPP). The BMPP will document CBM's commitment to control the fugitive dust emissions from being carried beyond the limits of the site. The BMPP will give consideration to the following:

- Identification of the main sources of fugitive dust emissions.
- Identification of potential causes for high dust emissions and opacity from these sources.
- Description of preventative and control measures in place or under development to minimize the likelihood of high dust emissions and opacity from the sources of fugitive dust identified above.
- Implementation schedule for the BMPP.
- Inspection and maintenance procedures and monitoring initiatives to allow effective implementation of the preventative and control measures.

The need and frequency for monitoring recommendations will be reviewed as part of the air quality assessment.

2.0 NOISE

A noise impact assessment will be completed in accordance with applicable NDMNRF and MECP requirements to identify potential noise levels from the project onto sensitive Point(s) of Reception (POR(s)) in the vicinity of the site. Based on a review of available information, it is expected existing or potential (i.e., vacant lots) POR(s) exist within 500 metres (m), in all cardinal directions of the proposed licence area. For completeness noise contour modelling results will also be provided extending 1 km beyond the proposed licence area. The noise impact assessment will be completed through the tasks described below.

2.1 Site Reconnaissance and Establishment of Existing Conditions (Baseline Noise Monitoring Program)

Golder will complete a site reconnaissance field program to review the site surroundings and to complete a ground-based review of PORs. Golder will also gather noise data to document existing noise levels in the vicinity of PORs that could be impacted by the proposed project.

Based on an initial review of publicly available imagery of the site and surrounding environment, it is expected the POR(s) in the vicinity of the site are in an area defined by the MECP as either Class 2 or Class 3 (Rural). This will be confirmed by the site reconnaissance. Documented levels will be compared against any previous noise studies completed for other lands in the area, if available.

In establishing existing conditions Golder will complete a noise monitoring program where existing baseline noise levels will be documented through unattended noise monitoring at four locations, generally in four cardinal directions of the main proposed processing plant location, to establish representative noise levels at PORs located in the vicinity of the site. The monitoring will be completed over a period of approximately one week.

2.2 Predictive Modelling and Impact Assessment

Golder will complete noise prediction modelling based on proposed operational information provided by CBM. Golder will also use available information, including Golder's database of similar noise sources, manufacturer's sound level data (to be provided by CBM, if required) and data gathered from operations at an existing CBM site (i.e., CBM's Osprey Quarry) using similar equipment to predict the off-site noise levels at the identified sensitive POR(s) using the International Standard "*Acoustics – Attenuation of Sound During Propagation Outdoors*" (i.e., ISO 9613 part 2) as required by the NDMNRF and MECP.

Through a review of publicly readily available information, if it is determined that an identified POR could also be directly impacted (through noise) from other aggregate operations in the area, a semi-quantitative cumulative noise impact assessment will be completed. If detailed modelling results or modelling files are available for the other aggregate operations a detailed quantitative study will be completed. If detailed modelling results or modelling files are not available for the other aggregate operations, the assessment will be limited to a semi-quantitative assessment. In accordance with accepted practices and guidance provided by the MECP, the haul-route analysis will consider the potential noise impacts of the project through a review of noise levels along the haul-route with and without the project. This will be completed through a high-level quantitative haul-route analysis to assess haul-route project truck noise levels resulting from project-associated truck travel on local roadways.

Prediction results from project on-site operations will be compared to the MECP exclusionary noise limits at the identified sensitive POR(s). Based on modelling results, Golder will identify mitigation that will need to be incorporated into the design of the project in order to be in compliance with applicable noise limits.

2.3 Reporting

Once the noise modelling is complete and demonstrates that the project can operate in compliance with the applicable MECP noise limits, Golder will prepare a noise impact assessment report documenting the findings of the assessment.

3.0 VIBRATION

3.1 Background Data Compilation and Review

Background data review for this phase of the project will include a review of existing documents and a number of information sources. These sources include, but are not limited to:

- Existing provincial and federal guidelines for the assessment of environmental impacts from blasting.
- Proposed blasting parameters.
- Current vibration monitoring records from an existing nearby quarry operated by CBM (Osprey Quarry).
- Blast vibration attenuation models from Golder's experience and from published literature.

3.2 Site Reconnaissance and Existing Conditions

The field investigation includes a site visit to identify the sensitive receptors and other features that may be potentially impacted.

3.3 Predictive Modelling

Predictive modelling to estimate the attenuation characteristics of ground and air vibration levels from blasting operations at sensitive receptors would typically involve monitoring a number of site blasts at specific locations. Since there are currently no blasting operations at the site, the investigation includes the compilation and analysis vibration monitoring information currently being collected at residential properties located nearby to a similar quarry operation (i.e., CBM's Osprey Quarry). A site visit will also be arranged to visit a nearby CBM operated aggregate quarry (Osprey Quarry) where the blasting operations are similar to those proposed for the site. Predictive modelling of both ground and air vibrations from the proposed blasting operations will be carried out using the historic data from the existing CBM Osprey Quarry. The impact assessment will assume maximum explosive weights per delay period and minimum distances between the blast source and receptor.

3.4 Impact Assessment and Reporting

There is a requirement for a Blast Design Report, which is also commonly referred to as a Blast Impact Assessment. The data collected during the site reconnaissance will be analyzed with the data provided by CBM to assess the ground and air vibration decay characteristics. This will provide ground and air attenuation models. The impact assessment will address the following topics:

- An estimate of the potential ground and air vibration levels at potential points of impact.
- Evaluations of:
 - The potential impact on the nearby sensitive receptors.
 - The potential impact of the blasting operations on bedrock strata and adjacent water wells.
 - The long-term impact of the blasting operations on surrounding structures.
 - The impact of ground vibration effects at adjacent Canadian Fisheries waters if and where applicable.
 - The risk for flyrock.

- Recommendations for the continued control of ground and air vibration effects.
- General recommendations to prevent wild flyrock events (as required by Ontario Regulation 244/97).
- The assessment will not include specific recommendations related to fly rock since this is addressed during the operational phase of the quarry when detailed design is completed for each individual blast.

The study findings, impact assessment, and recommended mitigation strategies will be presented in a report.

The Blast Design Report will reference Ontario Regulation 244/97 and note that this requirement applies to the proposed quarry.

4.0 CARBON FOOTPRINT STUDY

Golder will complete a carbon footprint study which will include analyses of direct and purchased electricity related greenhouse gas (GHG) emissions associated with the following aspects of the project:

- Land clearing of the project site
- Project operations
- GHG removals as a result of rehabilitation of the project site

The analysis will be conducted in accordance with applicable guidance from the GHG Protocol Initiative document “*GHG Protocol Corporate Accounting and Reporting Standard*” and the recently released Environment and Climate Change Canada document entitled “*Technical Guide Related to the Strategic Assessment of Climate Change*” (SACC). In order to prepare the above analysis, current and post-rehabilitation land use information will be incorporated, along with fuel and electricity consumption projections for the project during operations. The assessment will also include a comparison if the material was imported further from market and a discussion of potential GHG impacts related to removal of rock.

A technical memorandum will be developed, which will include a description of the methodology and the results of the assessment. The magnitude of GHG estimates associated with the project will be put into context using metrics available in public literature (e.g., the project’s contribution to local/regional GHG emissions).

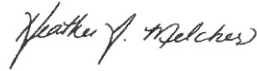
5.0 CLOSURE

We trust that this technical memorandum meets your current needs. Please contact Golder and CBM with any questions or comments.

Golder Associates Ltd.



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Air Quality Specialist



Dan Corkery
Senior Blasting / Vibration Consultant

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TECHNICAL MEMORANDUM

DATE August 24, 2022

Project No. 19129150

TO David Hanratty, PGeo
CBM Aggregates

CC Jennifer Deleemans, Mike Lebreton

FROM Heather Melcher

EMAIL heather_melcher@golder.com

PROPOSED CBM CALEDON QUARRY TERMS OF REFERENCE – WATER RESOURCES AND NATURAL ENVIRONMENT

Golder Associates Ltd. (Golder) has been retained by CBM Aggregates (CBM), a division of St. Marys Cement Inc. (Canada) to complete technical studies to accompany an application to the Ministry of Natural Resources and Forestry (MNR) for a new Class A Quarry Below Water licence under the *Aggregate Resources Act* (ARA) (project). The assessment will also be used for a Planning Act approval and application for Town of Caledon Official Plan and Zoning By-law amendment. Furthermore, these studies will provide an assessment of the application taking into consideration the applicable in-effect policies contained in the relevant Provincial Plans, Region of Peel Official Plan and Town of Caledon Official Plan.

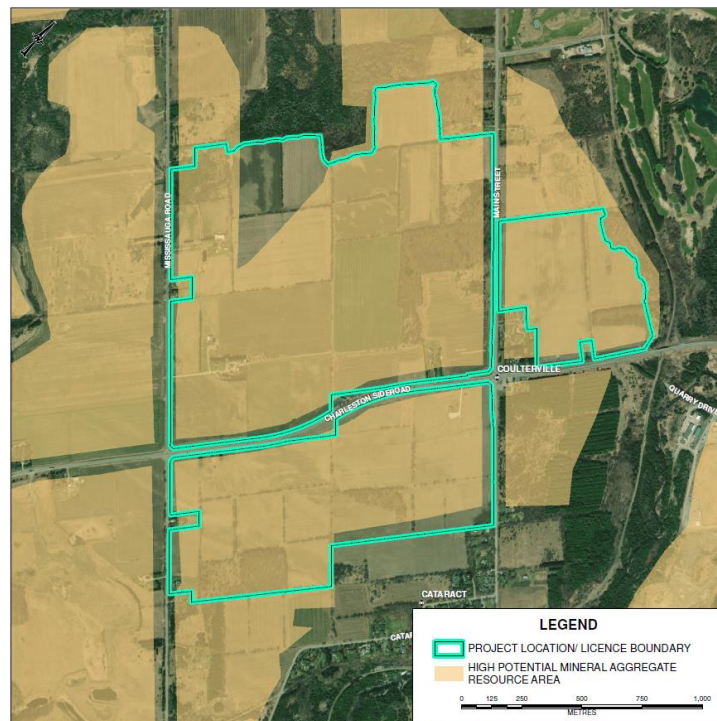


Figure 1: Proposed CBM Caledon Quarry Location

The properties to be licensed are located on Charleston Sideroad and Mississauga Road, Town of Caledon, Region of Peel, Ontario (site). The site is approximately 262.4 hectares (ha) in size (Figure 1).

This Terms of Reference (TOR) includes a summary of the assessment and deliverables associated with the water resources and natural environment components.

On June 2, 2021, CBM submitted to Credit Valley Conservation (CVC), the Town of Caledon, and the Region of Peel an earlier version of this TOR document, as requested during a meeting held on April 22, 2021. Comments were received from CVC on the TOR on July 9, 2021. Comments were also recently received from the Region of Peel on July 11, 2022. Golder has incorporated these comments into this TOR document, where applicable.

1.0 WATER RESOURCES

Groundwater and surface water resource investigations will be undertaken in accordance with the Technical Reports and Information Standards published by the MNRF in August 2020, with the following technical reports being prepared by qualified persons upon completion of the investigations.

Maximum Predicted Water Table Report

This report will detail how the maximum predicted water table is identified in metres above sea level, relative to the proposed depth of excavation at the site, and will be determined by monitoring the groundwater table for a minimum of one (1) year to account for seasonal variations and influences due to precipitation.

Water Report Level 1 and 2 (combined)

Level 1 – This assessment will determine the potential for impacts to groundwater and surface water resources and their uses (including water wells, groundwater aquifers, surface water courses and bodies, springs, discharge areas) and will identify if the site is in a Wellhead Protection Area for Quantity (WHPA-Q) under the Clean Water Act. If so, the report will identify applicable source water protection policies and mitigation measures that will be implemented.

Level 2 – Where the Level 1 assessment has identified a potential for impacts from the site on groundwater and/or surface water resources and their uses, an impact assessment will be carried out to determine the significance of the effect and the potential for mitigation. The assessment will address the potential effects of the operation on groundwater and surface water features located within the zone of influence, including but not limited to:

- Water wells (includes all types e.g., municipal, private, industrial, commercial, geothermal and agricultural);
- Springs (e.g., place where ground water flows out of the ground);
- Aquifers;
- Surface water courses and bodies (e.g., lakes, rivers, brooks); and
- Wetlands.

The assessment will include (but not be limited to) the following:

- A description of the physical setting including local geology, hydrogeology, and surface water systems;
- Any proposed water diversion, discharge, storage and drainage facilities;
- A water budget (e.g., how water is managed on-site);
- The possible positive or negative impacts that the proposed site may have on the water regime;
- Monitoring and mitigation plan(s); and
- Technical supporting data in the form of tables, graphs and figures.

Greenbelt Plan Considerations

The scope of the planned groundwater and surface water investigations will also address key hydrologic areas and features, as described in the Greenbelt Plan (2017). Key hydrogeologic areas are areas which contribute to the hydrologic functions of the Water Resource System. These areas maintain ground and surface water quality and quantity by collecting, storing and filtering rainwater and overland flow, recharge aquifers and feed downstream tributaries, lakes, wetlands and discharge areas. These areas are also sensitive to contamination and feed key hydrologic features and drinking water sources.

Key hydrologic areas include:

- Significant groundwater recharge areas;
- Highly vulnerable aquifers; and
- Significant surface water contribution areas.

Key hydrologic features within these areas include:

- Permanent and intermittent streams;
- Lakes (and their littoral zones);
- Seepage areas and springs; and
- Wetlands.

For lands within a key hydrologic feature in the Protected Countryside, it is noted that development or site alteration is permitted for aggregate extraction, subject to the non-renewable resource policies set out in Section 4.3.2 of the Greenbelt Plan.

Caledon Official Plan Considerations

The scope of the planned groundwater and surface water investigations will also address the requirements for development within valley and stream corridors as set out in Section 3.2.5 of the Town of Caledon Official Plan (2018). This includes the following considerations:

- The quality and quantity of surface water entering valley and stream corridors are to be maintained, and, where appropriate, enhanced and restored.

- Restoration and enhancement of valley and stream corridors is encouraged. Where appropriate, a riparian habitat zone will be maintained or established on lands abutting watercourses and waterbodies.
- Management and restoration of valley and stream corridors will adhere to the Town's ecosystem principle, goals, objectives, policies and performance measures.

Other Considerations

The groundwater and surface water investigations will be undertaken at the scales necessary to characterize groundwater and surface water conditions potentially impacted by the proposed quarry, including the immediate site, zone of influence and surrounding subwatershed scales, where information is available and relevant to the assessment of impacts.

The predicted zone of influence of the quarry will ultimately be determined through the hydrogeologic and surface water assessments, and as such, a pre-defined maximum zone of influence is not assumed. Justification of the proposed extent and scale of the investigation and analysis undertaken will be provided in the Water Report.

The impact assessment will evaluate the potential for cumulative impacts of the proposed quarry where information for the assessment of cumulative impacts is available and relevant to the impact assessment, including groundwater quantity, groundwater users and total groundwater use in the broader subwatershed).

The study will also assess the potential impact of the quarry in relation to future climate change, including a drought scenario, if considered applicable.

1.1 Hydrogeologic Investigation

The hydrogeologic investigation is a key component of the overall program to support the licence application. The hydrogeologic investigation program integrates with the surface water and natural environment studies. The key components of the hydrogeologic investigation are summarized below.

A karst assessment will also be completed as part of the hydrogeologic investigation which will include: an investigation of closed depressions and surface water flows, tracer tests and conductivity profiling in wells during the planned pumping tests, an evaluation of the proportions of surface water and groundwater flows in the study area, and an assessment of evidence potentially indicative of preferential flow in the bedrock aquifer.

1.1.1 Initial Activities

A detailed background review of hydrogeological information will be carried out initially, including the following:

- LIO SWOOP Topographic Data;
- OGS Surficial geology;
- OGS Bedrock geology;
- OGS Drift thickness;
- MECP Water Well Records;
- MECP PTTWs;
- AquaResource Integrated Water Budget Report - Tier 2, Credit Valley Source Protection Area;

- Information from previous site investigations Credit Valley Conservation (CVC) Subwatershed Study Reports;
- CVC Source Protection Area and CTC Source Protection Region Assessment Reports; and
- Other websites with information on water taking activities and natural features in the study area.

Published geological data for the area provides an initial understanding of the distribution of overburden on the site, the depth to bedrock, the thickness of the Gasport (formerly Amabel) Formation and approximate elevation of the base of the Gasport (formerly Amabel) Formation, and an initial understanding of groundwater elevations across the area.

The hydrogeological information compiled during the background review will be presented as a series of maps and will establish a framework for the refinement and finalization of the field investigations.

Initial activities will also include site reconnaissance of the area to help verify information obtained during the background review and support finalization of the field investigations.

A survey of private wells within 1 km of the site will also be undertaken.

1.1.2 Monitoring Well Installation and Testing

Twenty-eight monitoring well locations will be drilled, to an approximate depth of 30 m (assumed 5 m of overburden, on average, and 25 m of rock). All locations in the monitoring network will be surveyed for location and elevation. Further details of the proposed monitoring well network are provided in Attachment A.

Drilling, Core Logging and Photography

The drilling will be carried out under Golder supervision using Choice Sonic Drilling Ltd. (CSD), obtaining 100 mm continuous core through the overburden and HQ-sized (63.5 mm) continuous core in the bedrock. All cores will be logged and photographed. Overburden core will be bagged, and rock core will be boxed (1.5 m boxes holding a total of 3 m of core per box).

Following coring, the rock boreholes will be reamed to 120 mm to facilitate monitoring well installation. A surface casing will be installed into the top of rock to provide access for geophysical logging and hydraulic (packer) testing, and for monitoring well installation.

Geophysical Logging

Geophysical logging will be carried out immediately following the coring of the drillholes, and will consist of collecting natural gamma, conductivity, heat pulse flowmeter (static and low pumping conditions), and optical televiewer (OTV) logs. The field work and analysis will be carried out in house by Golder staff using in house equipment. Results will be compiled and processed relatively quickly and used to help plan the hydraulic (packer) testing program. All data will be processed and presented using WellCAD.

Hydraulic (Packer) Testing

Upon completion of geophysical logging, the boreholes will be packer tested. We will complete up to three interval tests per borehole using straddle packers (nominally spaced at 5 m), testing from the bottom of the hole up to the highest level possible within the water column. Using the geological and hydrogeological information obtained

from coring and geophysics, the tests will be conducted within appropriate geologic intervals (i.e., within the Gasport (formerly Amabel) or within the underlying strata).

Monitoring Well Installation and Instrumentation

Each of the 28 boreholes will be completed with two piezometers. The piezometers will typically have 1.5 m well screens and be 32 mm in diameter. The wells will be constructed by a licensed well driller using filter sand, bentonite pellets and grout, and completed at surface with a lockable protective casing and registered in the MECP system with a well tag.

We understand that it is important to obtain hydraulic information in the Gasport (formerly Amabel), and underlying Clinton and Cataract Groups, and propose that each piezometer nest target two of the three zones, to provide overall coverage of hydraulic heads in all three zones (i.e., 56 piezometers will provide the ability to have about 18 monitors in each of these three zones).

Single-well Hydraulic Testing

All piezometers will be developed, and single well response tests completed in the piezometer. This will be carried out by using dedicated water level loggers, which will be left in place for the groundwater monitoring program. Hydraulic conductivity will be estimated from the tests, and used as input to the hydrogeological assessment, and groundwater-surface water modelling.

Water Quality Sampling

All wells will be completed with dedicated water sampling equipment (tubing and Waterra foot-valves) for groundwater sampling. The wells will be purged and then sampled following standard collection and sample handling protocols. All 56 piezometers will be sampled for general chemistry, nutrients, inorganics and metals (RCAP suite), and 28 of the wells will also be sampled for BTEX and PHC F1-F4. The analytical work will be carried out by BV Labs (formerly Maxxam Analytics) in Mississauga.

Analysis and Reporting

The data collected during the drilling and testing, and water sampling will be compiled and used to inform other investigations and be incorporated into the combined Water Report Level 1/2 and a Maximum Predicted Water Table Report.

1.1.3 Groundwater Monitoring Program

The groundwater monitoring program will take place from the point of drilling the wells until submission of the licence application package to the MNRF and include monitoring of the 56 piezometers at the 28 proposed monitoring well locations, in addition to monitoring springs and seeps located in areas along the Credit River, the Niagara Escarpment and the Alton Forest complex.

All wells and piezometers will be equipped with water level loggers, programmed to record at 15 minute intervals. Loggers will be downloaded quarterly, and manual water level measurements made to correlate to the logger data. A barologger station will be set up at the site to provide barometric corrections to the logger data. Hydrographs will be compiled on a quarterly basis.

Analysis and Reporting

The data collected during the groundwater monitoring program will be compiled and used to inform other investigations, provide important hydrogeological inputs to groundwater-surface water modelling and support the

hydrogeological impact assessment. The overall results will be incorporated into the Level 1 and 2 Water Report and . Maximum Predicted Water Table Report.

1.1.4 Pumping and Tracer Tests

Based on the data obtained during the monitoring well and resource investigations described above, locations to conduct pumping / tracer tests will be selected on the property. Up to four tests, if required, will be completed depending on the nature of hydrogeologic conditions on the site.

Combined pumping and tracer tests will help establish the transmissivity of the rock, as well as assess the potential connectivity of fractures in the rock mass to various natural environment features in the area. Four pumping / tracer tests will be performed, each of 96 hours in duration, as described below.

Install Pumping Wells and Offset Monitoring Wells

Once the number and location of the test areas have been determined, a 150 mm diameter pumping well will be installed at each test location (cased through the overburden and open in the bedrock), to an assumed depth of 30 m (assumed 5 m through overburden and 25 m in the rock). Up to four offset wells nests will also be installed at each location to the same assumed maximum depth, completing the open holes with two-level 32 mm diameter piezometers, in a manner similar to the other monitoring wells. Pumping and offset observation wells will be MECP registered and tagged.

Obtain Category 2 PTTW

Golder will prepare and submit EASR applications on behalf of VCNA for permits to take water (PTTW) for each of the four planned 96 hour tests.

Conduct Four (96 hour) Pumping and Tracer Tests

Once the pumping and offset observation wells have been installed and permits obtained, pumping and tracer tests will be carried out. An ecologically friendly tracer such as fluorescein would be introduced in one or more observation wells prior to the start of pumping, and the pumping well water monitored using a fluorometer or other appropriate device to detect the potential presence of traced water at the pumping well. Pumped water will be managed to ensure that it is not recirculated into the groundwater system during the test.

Groundwater levels at the pumping well, offset wells, and other monitoring wells will be monitored using data loggers and/or manual measurements during the test. Levels would also be monitored prior to the test for a minimum of 48 hours and immediately following the test for a period of 7 days, to monitor the recovery data.

It is proposed that the four tests will be completed a minimum of 3 weeks apart, which should allow time for water levels to recover to ambient between successive tests.

Analysis and Reporting

The data collected during the pumping / tracer tests will be compiled and used to inform other investigations, provide important hydrogeological inputs to groundwater-surface water modelling and support the hydrogeological impact assessment. The overall results will be incorporated into the Level 1/2 Hydrogeological Study Report.

1.1.5 Integrated Groundwater / Surface Water Modelling

An integrated, fully-coupled groundwater / surface water model will be developed to simulate current conditions and estimate future water quantity impacts as a result of quarrying. The modelling will be undertaken using the computer program HydroGeoSphere (HGS).

HGS has been successfully applied in water resource and mining applications at the watershed and subwatershed scale in Ontario and worldwide. Of particular note, HGS was given a comparatively favourable review in the MNR-sponsored document *Integrated Surface and Groundwater Model Review and Technical Guide* (AquaResource, 2011).

HGS is a three-dimensional numerical code that can dynamically consider all major components of the hydrologic cycle, including: precipitation, evapotranspiration, snowmelt, overland flow, infiltration, unsaturated zone flow, and saturated groundwater flow. HGS may model flow within bedrock using an equivalent porous media (EPM) approach or a discrete fracture network; however, at the scale of this analysis we assume that an EPM approach is sufficient. HGS' fully inclusive treatment of the hydrologic system allows for a seamless and robust simulation of flow and water level behaviour within the watershed, including at quarries, streams, wetlands and within the subsurface.

The model will be constructed on the basis of both publicly available data and the results of the site-specific geology and water resources field assessments, including: Digital Elevation Model (DEM) topography, government mapping and databases (e.g., Ministry of Environment, Conservation and Parks [MECP], Water Well Information System [WWIS] and Permit To Take Water [PTTW] databases), background data/reporting including CVC source water protection modelling, climate data, subcatchment delineations and water budgets, drilling data including geologic picks and hydrostratigraphic unit characterization, geophysical testing, packer testing, pumping tests, spring reconnaissance and measured groundwater levels and surface water levels / flows. The model will be calibrated to field observations in both steady-state (long-term average) and transient settings at appropriate time scale(s).

The modelling assessment will consider the following base simulations:

- 1) Existing Conditions (calibrated model)
- 2) Full Build-Out Operations (maximum extraction and dewatered state)
- 3) Full Rehabilitation (all rehabilitative measures, including backfilling and flooding, in-place)

The modelling will examine potential impacts under both average annual steady-state and transient (likely monthly) conditions for each scenario. Modelled effects will include drawdown and flow changes at key receptors including PTTW permit holders, private water wells, wetlands, streams and the Credit River as well as any interaction with pre-existing source protection plans and policies. The modelling may also include, at a relatively coarse scale, other major water users within the zone of influence and will thus be able to address cumulative impacts.

After the base scenarios have been finalized, a sensitivity analysis will be performed to better understand potential upper and lower bounds to potential impacts.

1.1.6 Impact Assessment and Hydrogeological Reporting

The results of the various geological and hydrogeological field investigations, monitoring, pumping and tracer testing, and integrated groundwater-surface modelling will be brought together to complete a hydrogeologic impact assessment. The hydrogeologic impact assessment and its supporting studies will inform the natural environment studies and provide the basis for preparing the combined Level 1 and 2 Water Report and a Maximum Predicted Water Table for a Class A, Quarry Below Water licence application under the Aggregate Resources Act.

If the assessment identifies a potential for impacts, mitigation measures and/or an adaptive management plan, if required, will be identified in the report.

1.2 Surface Water Resources Assessment

A surface water monitoring program and impact assessment will be completed for the site and surrounding catchment areas. The impact assessment and reporting for these tasks will be combined with the results of the hydrogeological assessment in the combined Water Report Level 2 and a Maximum Predicted Water Table Report.

1.2.1 Background Review

Golder will complete a background review of the available information pertaining to the site and surround area that may be within the zone of influence of the proposed quarry. The information reviewed will consist of:

- Aerial photographs and topographic, physiographic and geologic mapping;
- Water Survey of Canada and Credit Valley Conservation stream gauging data;
- Meteorological data from local CVC gauges (i.e., 1795 Quarry Drive, Town of Caledon, etc.);
- Ontario source water protection mapping;
- Published water resources reports; and
- Any existing permits or monitoring reports from the site.

Any additional work to fill data gaps identified as part of the background review will be included in a separate scope and budget.

1.2.2 Field Monitoring

A stream monitoring network will be established on the watercourses that drain the site and the areas of the proposed numerical model extents. We have assumed this will include 14 - 16 monitoring stations on tributaries to the Credit River. The exact number of stations and locations will be determined through the initial field reconnaissance that will be completed with the hydrogeology and natural environment component leads.

Manual water level (staff gauges) and flow measurements will be conducted at each station quarterly for a period of two years. Pressure transducers will be deployed at each station to develop a water level record for each station at 15-minute intervals. A barologger will also be installed at the site to provide atmospheric pressure compensation for the water level transducer data. Two on-site stations will be paired with mini-piezometers to better understand surface groundwater interactions in the area. Field monitoring will be continued following the development of the impact assessment to continue the understanding and characterisation of the watercourses.

No stream flow monitoring stations are proposed on the main channel of the Credit River at this time. Publicly available government stream gauge data will be relied upon to provide water level and flow data from the Credit River. Available baseflow data will be supplemented by completing low flow monitoring in the Credit River at three locations, to evaluate the baseflow contributions in the project study area. Two low flow monitoring events are currently proposed.

The surface water monitoring will also include a one-year of quarterly water quality monitoring program. This program will include the analysis of metals, nutrients and general chemistry at five watercourse stations surrounding the Site. The five sampling locations will be selected from a subset of the stream flow monitoring stations in an attempt to maximise the value of each monitoring station by selected stations that more likely maintain water and flow year-round (avoiding stations that have dry conditions most of the year). The five stations will remain consistent throughout the sampling year. Turbidity and total suspended solids (TSS) will also be collected at these five stations to develop a turbidity / TSS relationship that can be used to estimate TSS from real-time measurements.

1.2.3 Cross Sectional Surveys

To develop a reliable stage-discharge rating curves (rating curves) at the surface water stations, cross sectional surveys will be collected and used to develop small local hydraulic models, which will in turn be used to interpolate and extrapolate the rating curves somewhat beyond the range of measured flows. It is recommended that approximately four detailed cross sectional surveys be completed at each surface water station to capture key hydraulic controls. Surveys are to be completed at upstream and downstream locations for each of the water level logger installations. The cross sectional surveys are typically distributed along the stream profile to capture the station equipment and key hydraulic characteristics (i.e., pools, riffles and control features), with the feature controlling the downstream water levels being most important to capture. The cross sectional surveys are expected to extend over the stream banks and on to the floodplain, to capture the total flow cross section under a flood event.

All survey data will be tied into a local benchmark which is permanently secured above the anticipated high water level. The water level logger installation will be surveyed to the benchmark upon installation and once each year to identify any settling, heave or other movement of the logger stations.

1.2.4 Rating Curve Development

The cross-sectional survey data will be collected and incorporated into a hydraulic model to develop theoretical rating curves which will be calibrated to measured flows.

Rating curves will be developed for each water level monitoring station in a hydraulic modelling package (i.e., HEC-RAS or equivalent) using the manual flow and water level measurements and cross sectional survey data collected during the monitoring program. The hydraulic model will utilize the cross sectional surveys at each station to generate a theoretical rating curve that will be calibrated using the measured flows and water levels collected over the monitoring period. Typically, the HEC-RAS modelled results are utilized to extrapolate the upper end of the rating curve, while field measured points better served to populate the lower and mid sections of the curve.

The Water Survey of Canada operates flow stations and already provides continuous flow data for the Credit River (downstream of Charleston Sideroad, and others further up and downstream), meaning that Golder will not need to develop rating curves and flow hydrographs for the stations on the Credit River.

1.2.5 Water Balance

An annual water balance will be developed for the drainage areas contributing to the quarry and monitoring station catchments using Thornthwaite water budgets available from Meteorological Services of Canada under the existing, operational and rehabilitated conditions. The results of the water balances will be used to help assess the potential impacts that the proposed extraction and rehabilitation activities may have on the existing local hydrologic cycle. Meteorological Services of Canada data will be compared to local CVC station data.

Results of the Thornthwaite water balance will also be used to verify the recharge distributions developed using the integrated numerical model.

1.2.6 Water Level Hydrographs

Continuous water level and flow data will be processed on a monthly basis to confirm data quality and equipment accuracy. This will allow Golder to identify, and correct, any variations or potential issues with the monitoring stations, or equipment, early to reduce the risk of lost data.

The continuous water level record will be used with the rating curves to develop a continuous flow record which will be presented in flow hydrographs. Flow hydrographs will be created for the continuous water level stations. The flow hydrograph records will be further analysed to provide an estimate of baseflow, flow duration statistics, peak flows and totals of monthly and annual discharge at each location. This information will be used to calibrate and verify the HGS existing conditions model.

1.2.7 Stream Temperature Monitoring

Through their review of an earlier version of this TOR document, CVC requested continuous temperature monitoring be completed at the 14 – 16 surface water stations located on tributaries to the Credit River. Dedicated water temperature loggers will be installed to collect continuous daily temperature measurements. Monitoring of these loggers will be completed as part of the quarterly surface water monitoring program outlined in Section 1.2.2.

1.2.8 Impact Assessment and Reporting

The data collected will be analysed in conjunction with the background information and integrated with the hydrogeological and natural science studies. The impact assessment will consider potential effects of the proposed extraction on the surface water features on the site, and up to the distance of the expected groundwater drawdown zone (nine stream flow monitoring stations have been assumed within this drawdown). Potential effects will be estimated for two future scenarios including full development of the proposed quarry (i.e., the last day of extraction) and rehabilitated conditions (i.e., the residual effects of the development following completion of rehabilitation to a flooded quarry lake or partially backfilled and flooded excavation).

Reporting will be completed in conjunction with the hydrogeology discipline and will include the following:

- Documented field data
- Present rating curves and water level / flow hydrographs as well as monthly and annual total volumes
- Present WSC gauge flows on the Credit River as well as monthly and annual total volumes

- Quantify expected project effects on surface water resources by comparing projected post-development to pre-development flow rates. This information will be provided to the Natural Environment discipline for assessment of the significance of changes to the natural environment

2.0 NATURAL ENVIRONMENT ASSESSMENT

Golder will undertake a work program for a Natural Environment Report (NER) in order to evaluate the natural features in the vicinity of the site. Golder will assess the potential impacts of the proposed below water extraction on those features and their ecological functions and, if necessary, recommend measures to prevent or mitigate negative impacts on any significant features.

This study will provide an assessment of the application taking into consideration the applicable in-effect policies contained in the relevant Provincial Plans, Region of Peel Official Plan and Town of Caledon Official Plan.

2.1 Background Review

A background information search and literature review will be completed to gather data about the local area and identify significant natural features, as defined under the Provincial Policy Statement, Greenbelt Plan, Region of Peel (Core Areas, Natural Features and Corridors and Potential Natural Features and Corridors), and Town of Caledon (Environmental Policy Areas), and species at risk (SAR) that have been reported as occurring, or potentially occurring in the local landscape, including the following resources:

- Natural Heritage Information Centre (NHIC) database maintained by the Ontario Ministry of Natural Resources and Forestry (MNRF)
- Species at Risk Public Registry
- Species at Risk in Ontario (SARO) List
- Atlas of Breeding Birds of Ontario (OBBA)
- Bat Conservation International (BCI) range maps
- Ontario Butterfly Atlas
- Atlas of the Mammals of Ontario
- Ontario's Reptile and Amphibian Atlas
- Land Information Ontario (LIO)
- MNRF LIO Aquatic Resources Area Layer
- MNRF Fish On-Line
- DFO Aquatic Species at Risk Maps
- eBird species range maps
- Town of Caledon Official Plan

- Region of Peel Official Plan
- Information available from CVC (e.g., fish collection records, wetland mapping)
- Credit River Watershed Natural Heritage System Final Summary Report
- Existing aerial photography.

To develop an understanding of the ecological communities, wildlife habitat and potential natural heritage features in the study area, MNR LIO data were used to create base layer mapping for the study area. A geographic query of the NHIC database was conducted to identify element occurrences of any natural heritage features, including wetlands, Areas of Natural and Scientific Interest (ANSIs), life science sites, rare vegetation communities, provincially rare species (ranked S1-S3 by the NHIC) and other natural heritage features within 1 km of the site.

2.1.1 SAR Screening

A SAR screening will be completed conducted for species listed under the *Endangered Species Act* (ESA) (Ontario 2007) per the Species at Risk in Ontario (SARO) List (O. Reg. 230/08), as well as those listed under the *Species at Risk Act* (SARA).

An assessment will be conducted to determine which SAR had potential habitat in the study area. Species with ranges overlapping the study area, or recent occurrence records in the vicinity, will be screened by comparing their habitat requirements to habitat conditions in the study area, as interpreted from aerial imagery.

The potential for the species to occur will be determined through a probability of occurrence. A ranking of low indicates no suitable habitat availability for that species in the study area and no specimens identified. Moderate probability indicates more potential for the species to occur, as suitable habitat appeared to be present in the study area, but no occurrence of the species has been recorded. Alternatively, a moderate probability could indicate an observation of a species, but there is no suitable habitat in the study area. High potential indicates a known species record in the study area (based on the background data review) and good quality habitat is present.

The desktop SAR screening will be confirmed and updated through the field surveys, described below.

2.2 Field Surveys

Based on preliminary desktop review, there are limited surface water features on the site. Golder is planning limited surveys in the designated and/or mapped significant woodlands as it is anticipated, based on review of land use policies and regulations, that extraction will not be permitted within the woodlands, and a setback may be required.

The following field surveys will be completed on the site (assuming no land access in the study area will be permitted). In the case that Golder is not scoping to complete the survey in the mapped/designated significant woodlands, it has been identified below. If a feature was to be excluded from the licence or extraction boundary, field surveys were sufficient to determine potential impacts of the project, but not as detailed as if the feature was going to be removed. The field surveys have been determined based on the known habitats on the site, as determined through the desktop assessment. Species-specific surveys will target SAR identified as having a moderate or high potential to occur in the vicinity of the site, to confirm use of habitats. Observations of wildlife and vegetation during all surveys will be documented and a running list maintained for inclusion in the NER.

Species-specific surveys will also provide data for evaluation of significant wildlife habitat (SWH). All surveys will be completed using provincially-approved methods and guidelines.

- Three-season plant community assessment (using Ecological Land Classification [ELC]) and botanical inventory (spring, summer and late summer). Due to the large size of the site, the botanical inventory will be limited to dominant species in each ELC community. Based on preliminary knowledge of the site, the potential for SAR plants is anticipated to be minimal and specific surveys for rare plants will not be required. However, all rare plants observed in the field will be recorded.
- Verification of any on-site wetlands and evaluation using the Ontario Wetland Evaluation System [OWES] where necessary).
- Woodland dripline delineation. Woodlands will be assessed for significance based on the applicable in-effect policies contained in the relevant Provincial Plans, Region of Peel Official Plan and Town of Caledon Official Plan. The boundary of significant woodlands will be delineated using a handheld GPS and verified with the Town of Caledon, the Region of Peel and CVC.
- Two rounds of breeding bird surveys.
- Three rounds of nighttime anuran (frog and toad) call count surveys.
- Turtle habitat assessment.
- Qualitative aquatic/fish habitat assessment of the on-site watercourses. “Windshield” survey of the watercourses that will be monitored as part of surface water assessment. Only the portion of the watercourses that intersect a public road or access will be assessed. The Credit River will not be assessed. It is assumed that there is sufficient background fish community data available for all watercourses and a fish inventory is not required.
- Bat habitat assessment. Golder will complete an assessment for habitat suitability for maternity roosting and for hibernacula.
- Bat acoustic assessment. Golder will deploy up to seven acoustic detectors to be located throughout the site in areas identified as suitable maternity roost habitat, during the bat habitat assessment. Acoustic monitoring will not be completed in the mapped/designated significant woodlands.
- Wildlife habitat assessment, including SWH. VES will be completed using MNR-approved protocols to search for wildlife, including mammals, amphibians, reptiles, etc. Focus will be given to habitat edges and all signs of wildlife (e.g., scat, fur, browse, etc.) will be documented.

2.3 Impact Assessment and Reporting

The data collected will be analysed in conjunction with the background data and integration with other disciplines, including hydrogeological and surface water studies. The impact assessment will consider all potential impacts of the proposed extraction on the natural environment on the site, and up to the distance of the expected groundwater drawdown zone. Where relevant, the impact assessment will evaluate wetland water balance based on guidance from Toronto and Region Conservation Authority (TRCA) documents: Wetland Water Balance Risk Evaluation (2017), Water Balance Guidelines for the Protection of Natural Features (2012), and Wetland Water Balance Monitoring Protocol (2016). The results of the desktop review, SAR screening, any consultation with

agencies, field surveys, and the impact assessment will be incorporated into a report that satisfies the requirements of both the NER, including relevant figures, under the ARA and an Environmental Impact Study (EIS) for the Town of Caledon and the Region of Peel. Mitigation measures and recommendations on suitable setbacks from natural features with appropriate rationale will also be included.

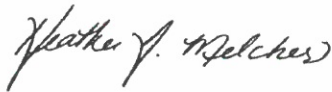
Where relevant, this study shall be shared with other technical experts completing studies for the application to avoid internal inconsistencies.

In addition, Golder will provide proactive input to the development of the site plans, including the progressive and final rehabilitation plans for the site, in consultation with the planner. It is anticipated that the analysis will also facilitate discussions of potential regional enhancement opportunities.

3.0 CLOSURE

We trust that this technical memorandum meets your current needs. Please contact the undersigned with any questions or comments.

Golder Associates Ltd.



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Attachments: Attachment A – Groundwater Monitoring Well Network Details

ATTACHMENT A

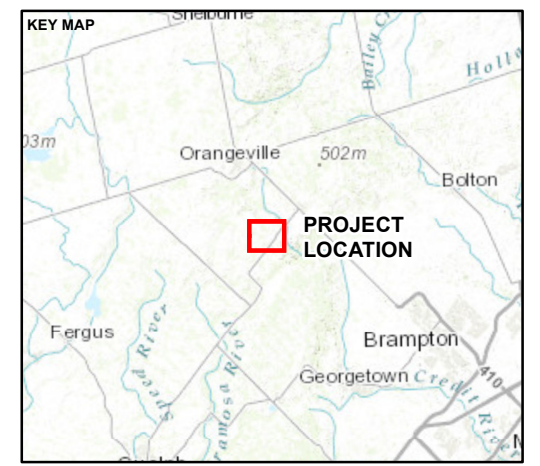
Groundwater Monitoring Well Network Details

**TABLE 1 - SUMMARY OF MONITORING WELLS INSTALLED
PROPOSED CBM CALEDON QUARRY**

Drilled Name:	Date Drilled:	Easting (m) UTM 17T	Northing (m) UTM 17T	Elevation (masl)	Total Hole Depth (mbgs):	Depth of casing (mbgs):	Depth to Bedrock (mbgs):	Depth to bottom of Gasport (mbgs)	Depth to top of Cabot Head (mbgs):	Downhole Geophysics Completion	Packer Testing Completion	Mon Well Completion	Deep (A) Well Stickup (m)	Deep (A) Well Formation	Screen from (m)	Screen to (m)	Shallow (B) Well Stickup (m)	Shallow (B) Well Formation	Screen from (m)	Screen to (m)
MW20-01(CAL) A/B	27-Feb-20	577458.50	4852268.28	395.10	19.41	9.06	8.53	14.86	17.32	13-Mar-20	19-Mar-20	20-Mar-20	0.99	Shaley Dolostone or Cabot Head Fm	15.40	17.10	0.99	Gasport Fm	11.10	12.62
MW20-02(CAL)	02-Mar-20	577900.04	4852138.37	399.63	19.57	15.94	15.24	18.05	19.57	11-Mar-20	N/A	23-Mar-20	1.05	Shaley Dolostone or Cabot Head Fm	16.96	18.48				
MW20-03(CAL)	04-Mar-20	578243.54	4851907.30	390.67	35.97	N/A	34.44	Not present	35.66	N/A	N/A	05-Mar-20	1.00	Overburden	15.58	18.63				
MW20-04(CAL)	06-Mar-20	578264.75	4852313.19	399.46	18.50	15.08	14.33	Not present	16.54	13-Mar-20	N/A	24-Mar-20	1.04	Shaley Dolostone or Cabot Head Fm	16.11	17.63				
MW20-05(CAL) A/B	09-Mar-20	578423.10	4852712.60	399.63	14.84	2.06	1.52	10.60	13.91	20-Mar-20	25-Mar-20	25-Mar-20	1.00	Shaley Dolostone or Cabot Head Fm	12.25	13.77	1.00	Gasport Fm	4.25	5.77
MW20-06(CAL) A/B	10-Mar-20	578474.24	4852972.59	400.15	16.03	2.32	2.14	10.96	14.25	23-Mar-20	26-Mar-20	26-Mar-20	0.99	Gasport Fm	10.12	11.64	0.99	Gasport Fm	4.20	5.72
MW20-07(CAL) A/B	11-Mar-20	578359.89	4853250.44	404.07	19.45	2.74	2.13	13.20	16.40	18-Mar-20	01-Apr-20	01-Apr-20	0.77	Shaley Dolostone or Cabot Head Fm	15.11	16.63	0.77	Gasport Fm	9.74	11.26
MW20-08(CAL) A/B	13-Mar-20	578009.81	4853574.83	406.93	18.59	2.74	1.98	15.10	17.32	19-Mar-20	30-Mar-20	31-Mar-20	0.92	Gasport Fm	13.30	14.82	0.92	Gasport Fm	5.38	6.90
MW20-09(CAL)	17-Mar-20	578343.84	4854157.49	399.95	9.01	5.79	5.33	Not Present	7.48	26-Mar-20	N/A	07-Apr-20	1.01	Shaley Dolostone or Cabot Head Fm	6.85	8.37				
MW20-10(CAL) A/B	19-Mar-20	577837.95	4854407.28	411.32	21.19	12.04	10.97	16.76	19.55	24-Mar-20	08-Apr-20	08-Apr-20	0.92	Shaley Dolostone or Cabot Head Fm	18.62	20.14	0.89	Gasport Fm	14.49	16.01
MW20-11(CAL) A/B	24-Mar-20	577671.98	4853921.39	409.72	19.39	3.07	2.13	16.46	18.16	07-Apr-20	14-Apr-20	15-Apr-20	1.03	Gasport Fm	13.81	15.33	1.01	Gasport Fm	3.96	5.48
MW20-12(CAL) A/B	26-Mar-20	577271.90	4854321.42	412.43	22.65	5.94	3.66	19.80	21.66	08-Apr-20	17-Apr-20	17-Apr-20	1.02	Gasport Fm	17.09	18.62	1.01	Gasport Fm	4.42	5.94
MW20-13(CAL) A/B	08-Apr-20	576873.11	4854473.14	415.53	28.23	15.08	13.10	23.92	25.68	15-Apr-20	23-Apr-20	24-Apr-20	0.93	Shaley Dolostone or Cabot Head Fm	24.05	25.57	0.93	Gasport Fm	18.14	19.66
MW20-13 (CAL) C	08-Apr-20	576873.11	4854473.14	415.53	5.10	N/A	N/A	N/A	N/A	N/A	N/A	08-Apr-20	0.93	Overburden	3.08	4.60				
MW20-14(CAL) A/B	28-Apr-20	577575.99	4853100.42	406.71	26.35	2.74	2.29	22.40	24.50	14-May-20	26-May-20	26-May-20	0.96	Shaley Dolostone or Cabot Head Fm	22.60	24.12	1.05	Gasport Fm	14.98	16.50
MW20-15(CAL) A/B	20-May-20	576576.79	4853544.15	417.06	37.17	12.30	11.60	33.84	35.62	27-May-20	08-Jun-20	09-Jun-20	0.70	Shaley Dolostone or Cabot Head Fm	33.77	35.29	0.71	Gasport Fm	28.81	30.33
MW20-15 (CAL) C	20-May-20	576576.79	4853544.15	417.06	5.00	N/A	N/A	N/A	N/A	N/A	N/A	20-May-20	0.70	Overburden	2.74	4.27				
MW20-16(CAL) A/B	22-May-20	576784.58	4853806.76	421.40	39.77	14.90	11.90	35.52	37.28	26-May-20	10-Jun-20	10-Jun-20	1.05	Gasport Fm	34.84	36.36	1.05	Gasport Fm	16.80	18.33
MW20-17(CAL) A/B	26-May-20	576752.28	4852966.36	406.64	28.82	3.15	3.05	24.84	27.49	01-Jun-20	02-Jun-20	02-Jun-20	1.05	Shaley Dolostone or Cabot Head Fm	25.64	27.16	0.99	Gasport Fm	12.75	14.27
MW20-18(CAL)	09-Jun-20	577058.36	4852658.80	404.29	28.15	12.19	11.88	23.80	26.06	12-Jun-20	15-Jun-20	15-Jun-20	1.03	Gasport Fm	12.42	13.94				
MW20-19(CAL) A/B	27-Oct-20	576906.96	4851999.96	396.98	27.39	6.20	2.14	22.05	24.48	29-Oct-20	30-Oct-20	31-Oct-20	1.07	Gasport Fm	15.95	17.47	1.07	Gasport Fm	8.00	9.52
MW20-20(CAL) A/B	29-Oct-20	576476.35	4852467.69	403.00	27.99	5.98	2.14	25.15	27.18	30-Oct-20	03-Nov-20	03-Nov-20	0.82	Shaley Dolostone or Cabot Head Fm	25.33	26.85	0.82	Gasport Fm	12.97	14.49
MW20-20(CAL) C	03-Nov-20	576476.26	4852468.33	403.00	5.00	N/A	2.14	N/A	N/A	N/A	N/A	03-Nov-20	0.96	Gasport Fm	2.42	3.95				
MW20-21(CAL) A/B	04-Nov-20	576014.37	4852839.77	415.23	39.70	15.10	12.51	36.73	38.38	05-Nov-20	06-Nov-20	07-Nov-20	1.07	Gasport Fm	33.27	34.79	1.07	Gasport Fm	15.77	17.29
MW20-22(CAL) A/B	18-Nov-20	575785.36	4851966.28	399.27	30.75	5.94	4.57	28.16	29.81	18-Nov-20	N/A	19-Nov-20	0.97	Goat Island Fm	23.47	25.00	0.97	Goat Island Fm	6.89	8.41
MW20-23(CAL) A/B	23-Nov-20	576205.53	4851555.91	395.05	26.76	12.19	11.28	23.54	25.30	24-Nov-20	N/A	24-Nov-20	0.87	Shaley Dolostone or Cabot Head Fm	22.59	24.11	0.87	Goat Island Fm	14.68	16.20
MW20-23 (CAL) C	23-Nov-20	576205.91	4851556.34	395.00	7.00	N/A	N/A	N/A	N/A	N/A	N/A	23-Nov-20	0.88	Overburden	4.57	6.09				
MW20-24(CAL) A/B	03-Dec-20	575337.66	4854341.85	437.75	37.49	20.88	20.11	37.49	N/A	04-Dec-20	N/A	04-Dec-20	0.87	Gasport Fm	33.81	35.33	0.87	Goat Island Fm	21.49	23.02
MW20-25(CAL) A/B	10-Dec-20	574853.76	4852900.48	419.02	51.82	13.39	10.52	48.93	50.67	10-Dec-20	N/A	11-Dec-20	1.56	Gasport Fm	44.03	45.55	1.55	Goat Island Fm	16.84	18.36
MW20-26(CAL) A/B	17-Dec-20	574373.86	4853638.42	438.89	66.11	15.55	12.19	64.55	66.11	18-Dec-20	N/A	21-Dec-20	1.16	Gasport Fm	55.16	56.68	1.16	Goat Island Fm	31.12	32.64
MW20-26 (CAL) C	17-Dec-20	574375.17	4853637.62	438.88	10.00	N/A	N/A	N/A	N/A	N/A	N/A	17-Dec-20	1.07	Overburden	7.26	8.78				
MW20-27(CAL) A/B	12-Feb-21	575953.96	4853770.16	431.15	52.43	31.24	28.96	50.32	51.93	17-Feb-21	N/A	18-Feb-21	0.97	Goat Island Fm	41.99	43.51	0.98	Goat Island Fm	33.85	35.37
MW20-28(CAL) A/B	22-Feb-21	576139.79	4854987.82	419.31	30.82	12.80	12.19	28.45	30.20	23-Feb-21	N/A	23-Feb-21	0.96	Gasport Fm	24.07	25.59	0.93	Gasport Fm	16.51	18.03



- LEGEND**
- MONITORING WELL
 - ⊗ MONITORING WELL (PUMPING TEST)
 - ⊗ TEST WELL
 - HISTORICAL MONITORING WELL
 - TOWN/VILLAGE
 - WATERCOURSE
 - ROAD
 - WATERBODY
 - ▨ WETLAND
 - ▭ PRELIMINARY PROJECT LOCATION



NOTE(S)

REFERENCE(S)

1. BASE DATA MNRF LIO OBTAINED 2020
2. IMAGERY FIRSTBASE SOLUTIONS SPRING 2019 (15CM RESOLUTION) AND SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
3. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
CBM AGGREGATES, A DIVISION OF ST. MARYS CEMENT INC. (CANADA).

PROJECT
CALEDON QUARRY

TITLE
2020-2021 MONITORING AND PUMPING WELL LOCATIONS

CONSULTANT	DATE
GOLDER MEMBER OF WSP	YYYY-MM-DD 2022-08-26
	DESIGNED CGE
	PREPARED CGE
	REVIEWED GP
	APPROVED -

PROJECT NO. 19129150	CONTROL 0006	REV. 0.0	FIGURE 1
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TECHNICAL MEMORANDUM

DATE August 19, 2022

Project No. 19129150

TO David Hanratty, PGeo
CBM Aggregates

CC Jennifer Deleemans, Mike Lebreton

FROM Heather Melcher

EMAIL heather_melcher@golder.com

PROPOSED CBM CALEDON QUARRY TERMS OF REFERENCE – SOCIO-ECONOMICS

Golder Associates Ltd. (Golder) has been retained by CBM Aggregates (CBM), a division of St. Marys Cement Inc. (Canada) to complete technical studies to accompany an application to the Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNR) for a new Class A Quarry Below Water licence under the *Aggregate Resources Act* (ARA) (project). The study will provide an assessment of the application taking into consideration the applicable in-effect policies contained in the relevant Provincial Plans, Region of Peel Official Plan and Town of Caledon Official Plan. The properties to be licensed are located on Charleston Sideroad and Mississauga Road, Town of Caledon, Region of Peel, Ontario (site). The site is approximately 262.4 hectares (ha) in size (Figure 1).

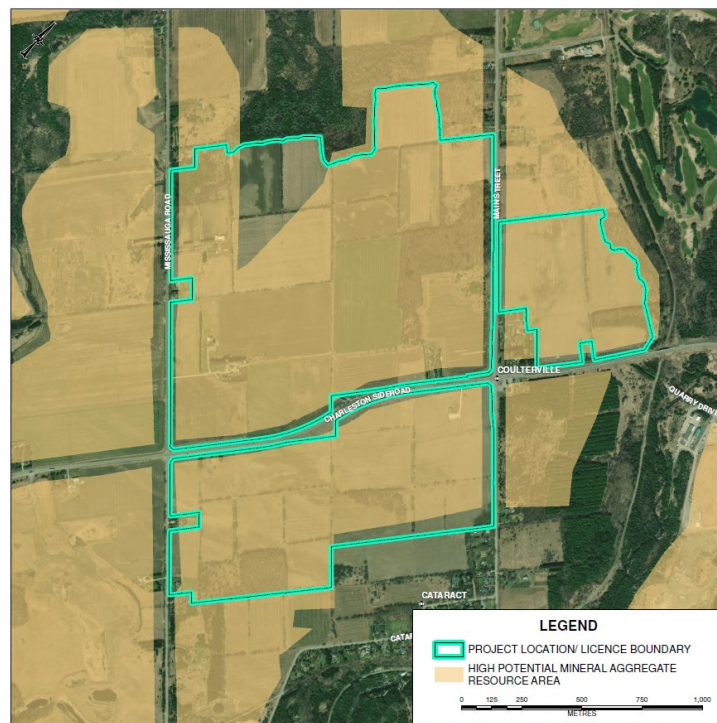


Figure 1: Proposed CBM Caledon Quarry Location

This Terms of Reference (TOR) includes a summary of the assessment and deliverables associated with the socio-economic assessment, a study that CBM commissioned voluntarily to help support the overall application. It should be noted that this study is not a requirement of the ARA or the Planning Act.

1.0 SOCIO-ECONOMIC SCOPE OF WORK

1.1 Objectives of the Socio-economic scope of work

Golder will undertake a work program for a socio-economic assessment of the site. The site consists primarily of open cultivated fields, uncultivated land including overgrown farmland, pastureland and farmstead/residential areas, and wooded areas.

The objectives of the socio-economic assessment are to evaluate the existing socio-economic conditions in the study area and establish whether or not any changes to these conditions will occur as a result of the project.

Conceptually, the socioeconomic environment can be considered in terms of five key “assets”:

- Human Assets (e.g., people)
- Physical Assets (e.g., schools, housing, and roads)
- Natural Assets (e.g., community natural resources and outdoor spaces)
- Cultural Assets (e.g., recreational facilities, cultural resources)
- Economic Assets (e.g., sources of employment and income)

1.2 Methods and Approach

Findings from public engagement activities have highlighted the following topics of concern in the local community:

- Potential for impacts to the natural environment including the Credit River
- Potential for impacts to surrounding properties
- Nuisance effects (e.g., noise, air pollution, vibration)
- Human health effects (e.g., from dust, blasting, water quality)
- Damage to personal property
- Disruption to use and enjoyment of public spaces and personal property
- Effects to tourism

A baseline socio-economic environment will be established from which the magnitude of effects can be determined. A study area will be developed giving consideration to the study areas for the discipline studies noted above as well as the extent of residences within the vicinity of the site. The baseline will be established through a desktop review of existing information, including the following:

- Statistics Canada census data
- Community profiles
- Community and municipal websites and official community plans and bylaws
- Local media articles
- Statistical reports and secondary documentation from local government
- Regional and local growth strategy and land use documents

The main scope of the socio-economic assessment is to address concerns related to these topics, and accordingly will serve as the components for further evaluation in the socio-economic assessment. This includes drawing upon findings from relevant technical studies being completed for this project including (but not limited to) impact assessments related to:

- Natural Environment
- Noise
- Blast Design
- Air Quality
- Water Resources
- Visual and Cultural Heritage
- Traffic

A review of these technical studies and their findings will be conducted to understand how any identified effects from these studies will have implications (positive or negative) for the socio-economic environment, with respect to the concerns listed above.

The extent of effects will be evaluated based on the change to the existing environment due to the project, and will be determined based on existing data, quantitative findings from other studies and professional judgement.

A study on the effect of the proposed change on the financial and economic sustainability of the region will be undertaken. The economic impact assessment will produce multiple output metrics, specifically including a comparison of baseline and estimated impacts over the lifetime of the project in terms of:

- Annual impact on jobs including direct (at the quarry and in transport of aggregate) and indirect (spin-off employment from local expenditure);
- Annual contribution to employment income based on industry norms;
- Annual direct contribution to municipal and county property taxes;
- Annual direct contributions to licence fees, levies, and other negotiated benefits;
- Annual direct contribution to education taxes; and,

- Other economic benefits for the region, including cost reductions for construction materials and output incorporated into the post-life cycle private infrastructure of the region.

These results would be presented at a Provincial, regional, and local level. To inform the analysis of the metrics, this assessment will use public data on regional economic activity, the relationship between output and employment in the aggregate sector, available estimates of transportation costs, and direct research into county and municipal tax policies. In order to calculate tax contributions, the value of the site can be estimated based on output and acreage, although this effort can be replaced by a formal valuation if one is available.

Real cost reductions are expected for regional transportation infrastructure investment from the Project. By combining the public data on existing aggregate producers with public data on transportation networks, it is possible to forecast potential price impacts for nearby population centres. The project case would be compared against a baseline case where aggregate would be shipped from existing pits and quarries over longer distances and at greater expense. The major beneficiary of these changes would be in road construction, which use about 60% of aggregate production (cement prices are driven more by other factor costs) and can be used to advance the argument that the Project can improve the economic sustainability of the Region beyond Project employment.

Potential effects to surrounding properties would be characterized through the on-going technical studies and literature reviews of other relevant studies and local information, coupled with the economic analysis of local benefits and road transportation effects.

1.3 Deliverables

A socio-economic and community interests report will be prepared focused on the identified areas of stakeholder concerns. The report will include the results of the economic study and will characterize effects to the socio-economic environment to residents using the results of technical studies, where possible.

2.0 CLOSURE

We trust that this technical memorandum meets your current needs. Please contact Golder and CBM with any questions or comments.

Golder Associates Ltd.

Sara Jarrett, BA
Senior Human Environment Consultant

Heather Melcher, MSc
Director, Ecology - Ontario

SJ/HM/wlw

TECHNICAL MEMORANDUM

DATE August 19, 2022

Project No. 19129150

TO David Hanratty, PGeo
CBM Aggregates

CC Jennifer Deleemans, Mike Lebreton

FROM Heather Melcher

EMAIL heather_melcher@golder.com

PROPOSED CBM CALEDON QUARRY TERMS OF REFERENCE – VISUAL IMPACT ASSESSMENT

Golder Associates Ltd. (Golder) has been retained by CBM Aggregates (CBM), a division of St. Marys Cement Inc. (Canada) to complete technical studies to accompany an application to the Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNR) for a new Class A Quarry Below Water licence under the *Aggregate Resources Act* (ARA) (project). The project also requires Planning Act approval and a Town of Caledon Official Plan and Zoning By-law amendment. This study will provide an assessment of the application taking into consideration the applicable in-effect policies contained in the relevant Provincial Plans, Region of Peel Official Plan and Town of Caledon Official Plan. The properties to be licensed are located on Charleston Sideroad and Mississauga Road, Town of Caledon, Region of Peel, Ontario (site). The site is approximately 262.4 hectares (ha) in size (Figure 1).

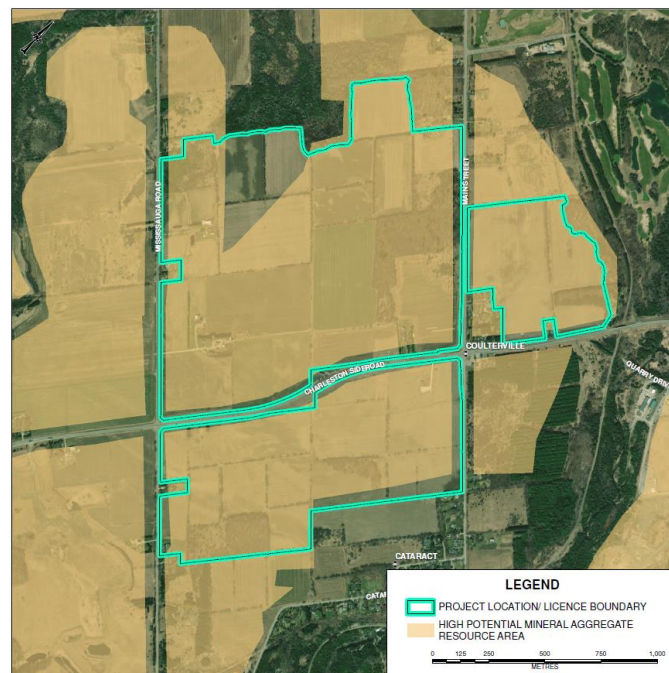


Figure 1: Proposed CBM Caledon Quarry Location

This Terms of Reference (TOR) includes a summary of the assessment and deliverables associated with the visual component. While a visual impact assessment (VIA) is not a requirement of the ARA licencing process, a VIA is required for the Town of Caledon Zoning By-law amendment as per sections 5.11.2.4.2(e) and 5.11.2.4.11 of the Official Plan. The VIA will also be required as part of the *Ontario Planning Act* application for the project. It is anticipated that illustrating visual effects will be requested by stakeholders and members of the public.

1.0 VISUAL IMPACT ASSESSMENT

1.1 Existing Conditions

The purpose of this visual baseline assessment is to illustrate the existing visual character of the landscape within the project location and to identify potential visual receptor locations with a range of viewing conditions that would have visibility of the proposed project.

To establish the landscape character, understand the current baseline conditions of the site, and identify potential receptors in the vicinity of the site, the following desktop tasks will be conducted:

- 1) Data Acquisition (data to be obtained to support the VIA includes the following):
 - Recent high-resolution imagery.
 - Recent digital terrain model (DTM, bare earth).
 - Recent digital surface model (DSM, bare earth, and all features on the ground).
 - Base NDMNRF data layers areas, and trails.
 - Inventory and location for all potential visual receptor locations within the study area based on public consultation, imagery, NDMNRF data, and GIS analysis.
 - Inventory and location for all potential known built heritage resources and cultural heritage landscapes identified in Golder's cultural heritage studies for the project.
 - Recent and proposed project site plans and descriptions, ideally including during operations configuration and post-closure conditions.
- 2) Study Area delineation at 1 km from the site.
- 3) A preliminary visibility analysis will be completed with the DSM to identify potential receptor viewpoint locations within the Study Area that have a line-of-site to the topographic terrain within the Project Area. The viewshed analysis will be completed with NDMNRF DSM data that have been captured in late fall or early spring in leaf off conditions to provide a worst-case scenario for viewing the project features.
- 4) Further refinement of the potential viewpoint locations based on the preliminary visibility analysis and desktop data review of mapped roadways, residences, places of business, recreation areas and trails within the study area.

Site reconnaissance and photographic inventory will be completed to confirm findings from the desktop data review and visibility analysis at up to 28 viewpoints. A collection of landscape photographs, GPS locations, and field observations will be collected to document existing viewing conditions and establish the landscape character of the study area for the baseline assessment. Photographs will also be taken to support the development of photo-composite simulations of the site to support the visual effects assessment. The locations of the 28 potential viewpoints from public and private lands are shown on the attached Figure 2 and listed below.

Viewpoint 1: View from turn on Cataract Road. Potential receptors include nearby residents, motorists, pedestrians, and recreational users.

Viewpoint 2: View from residence near 1311 Cataract Road. Potential receptors include nearby residents, motorists, pedestrians, and recreational users.

Viewpoint 3: View from Cataract Road. Across the road from a residence at 1369 Cataract Road. Potential receptors include nearby residents, motorists, pedestrians, and recreational users.

Viewpoint 4: View from agricultural field northwest of a residence at 1346 Cataract Road. Potential receptors include nearby residents.

Viewpoint 5: View from the corner of William and Albert Streets. Across the road from a residence at 75 William Street. Potential receptors include nearby residents, motorists, pedestrians, and recreational users.

Viewpoint 6: View from William Street. Across the road from residences at 61 and 63 William Street. Potential receptors include nearby residents, motorists, pedestrians, and recreational users.

Viewpoint 7: View from agricultural field northwest of residences at 48 William Street and Deagle Lane. Potential receptors include nearby residents.

Viewpoint 8: View from agricultural field southwest of residences along Cataract Road. Potential receptors include nearby residents.

Viewpoint 9: View from side of the road in front of 18203 Cataract Road. Potential receptors include nearby residents, motorists, pedestrians, and recreational users.

Viewpoint 10: View from side of road at Cataract Road and Charleston Sideroad. Potential receptors at this busy intersection include motorists, residences, customers at the ESSO gas station, convenience store and restaurant.

Viewpoint 11: View from agricultural field northwest of residence at 1626 Charleston Sideroad. Potential receptors include nearby residents.

Viewpoint 12: View from agricultural field northeast of residence at 18471 3 Line West. Potential receptors include nearby residents.

Viewpoint 13: View from side of the road in front of residence at 18722 Main Street. Potential receptors include nearby residents, motorists, pedestrians, and recreational users at the Osprey Valley Golf course.

Viewpoint 14: View from agricultural field southwest of residence at 18885 Peel Regional Road 136. Potential receptors include nearby residents.

Viewpoint 15: View from agricultural field northeast of residence at 18785 Mississauga Road. Potential receptors include nearby residents.

Viewpoint 16: View from agricultural field northeast of residence at 18627 Mississauga Road. Potential receptors include nearby residents.

Viewpoint 17: View from agricultural field northwest of residence at 1420 Charleston Sideroad. Potential receptors include nearby residents.

Viewpoint 18: View from agricultural field northeast of residence at 18309 Mississauga Road. Potential receptors include nearby residents.

Viewpoint 19: View from agricultural field northeast of residence at 18209 Mississauga Road. Potential receptors include nearby residents.

Viewpoint 20: View from side of the road at the driveway entrance to 1177 Cataract Road. Potential receptors include nearby residents, motorists, pedestrians, and recreational users.

Viewpoint 21: View looking northwest from curve on Charleston Sideroad. Potential receptors include nearby residents, motorists, pedestrians, and recreational users.

Viewpoint 22: View looking southeast from curve on Charleston Sideroad. Potential receptors include nearby residents, motorists, pedestrians, and recreational users.

Viewpoint 23: View from the Bruce Trail. Potential receptors include pedestrians and recreational users.

Viewpoint 24: View from the Elora-Cataract Trailway. Potential receptors include nearby residents, pedestrians, and recreational users.

Viewpoint 25: View looking southwest and view looking northeast from Main Street, approximately 500 m northwest of the Main Street and Charleston Sideroad intersection. Potential receptors include nearby residents, motorists, pedestrians.

Viewpoint 26: View from Mississauga Road, approximately 150 m northwest of entrance to residence at 18221 Mississauga Road. Potential receptors include nearby residents, motorists, pedestrians.

Viewpoint 27: View from Mississauga Road, approximately 50 m northwest of entrance to residence at 18667 Mississauga Road. Potential receptors include nearby residents, motorists, pedestrians.

Viewpoint 28: View from Mississauga Road and Charleston Sideroad intersection. Potential receptors include nearby residents, motorists, pedestrians.

1.2 Analysis and Effects Assessment

Once an inventory of existing conditions has been completed, potential visual effects during operations and post-closure will be illustrated. Project design information will be incorporated into the illustration of visual impacts, including:

- Site plans during operations, phased rehabilitation and post-rehabilitation, existing topography (elevations and contours), vegetation, the location of any proposed structures and equipment, and the alignment of line-of-sight cross sections.

- Description of closure and progressive and final rehabilitation activities.
- Landscape design mitigations (e.g., tree planting, fencing, phased rehabilitation) and air or noise design mitigations (e.g., berms).

A viewshed analysis will be completed with the 28 viewpoints selected in the baseline assessment to determine which viewpoints have the highest visibility of the project design features. The number of viewpoints for the effects assessment will then be further refined to 10 key viewpoints that have the highest visibility of the project based on the results of the viewshed analysis and proximity of nearby receptors.

Rendered images of the proposed project components will be developed from the 10 key viewpoints using Visual Nature Studio 3D landscape model software. Photo simulations will be created by compositing the render images of the design components with the site photographs to illustrate the potential visual effects of the project during operations and post-closure. The photo-composite simulations will be completed at operations and post-rehabilitation phases. The VIA will involve a review of the viewshed analysis, line-of-sight cross sections and photo simulations to determine the predicted level of visibility of the project and degree of compatibility with the existing landscape character. The simulations, and cross sections will also help to illustrate the project's design and visual impact to surrounding property owners and stakeholders during public consultation.

1.3 Reporting

A VIA report will be developed that includes the results of the existing conditions assessment, analysis, and effects assessment. Recommendations for mitigation measures to address potential visual effects will also be identified.

Where relevant, this study shall be shared with other technical experts completing studies for the application to avoid internal inconsistencies.

2.0 CLOSURE

We trust that this technical memorandum meets your current needs. Please contact Golder and CBM with any questions or comments.

Golder Associates Ltd.



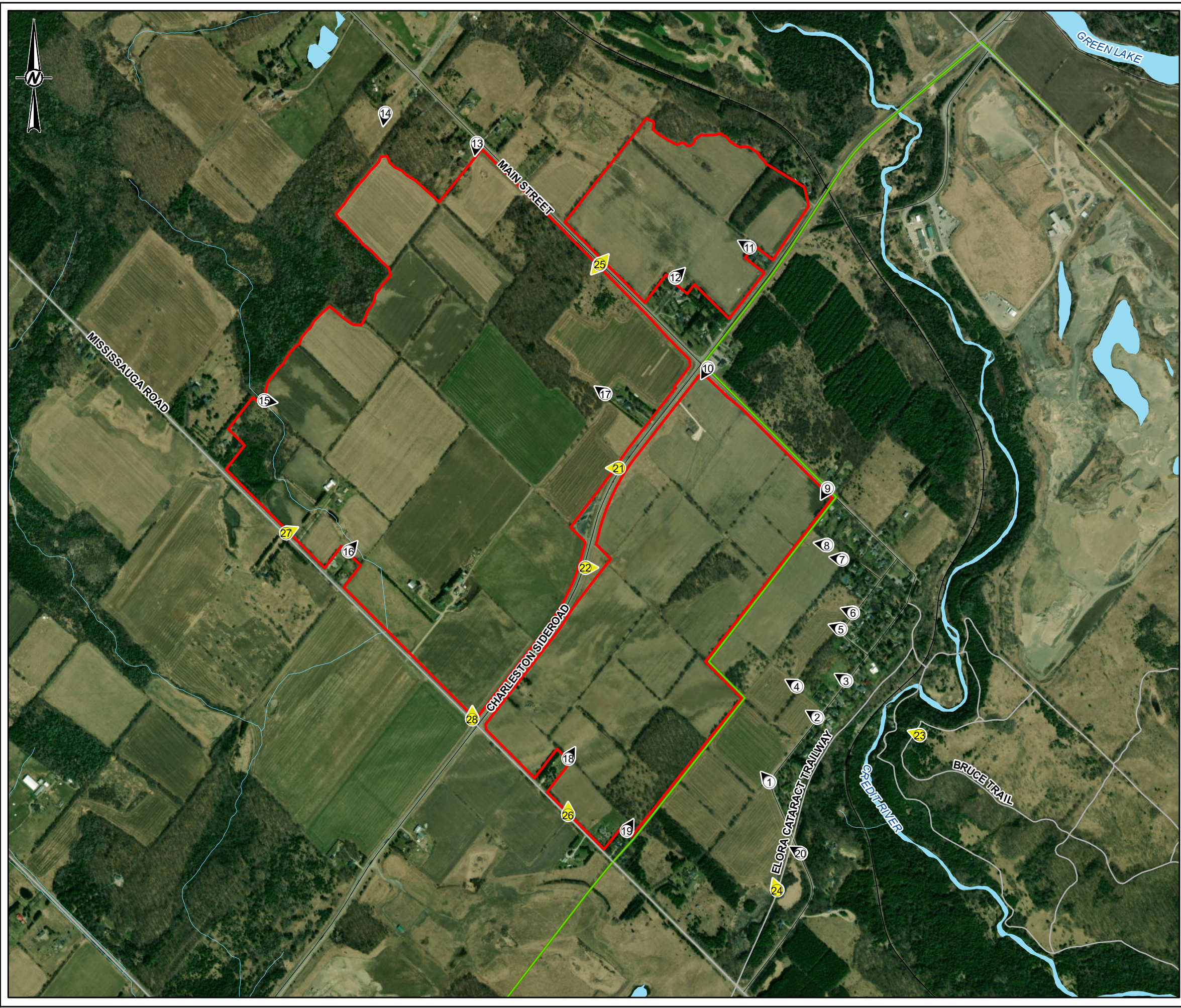
Carla Evans, MSc Geography
Director, Senior Geospatial Consultant

CE/HM/mp/wlw

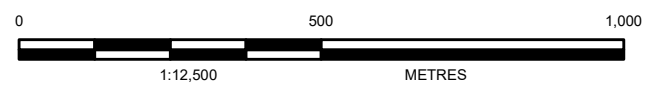


Heather Melcher, MSc
Director, Ecology

Figure



- EXISTING VIEWPOINT LOCATION AND VIEWING DIRECTION
- PROPOSED VIEWPOINT LOCATION AND VIEWING DIRECTION
- ROAD
- RAILWAY
- TRAIL
- WATERCOURSE
- WATERBODY
- NIAGARA ESCARPMENT PLAN
- APPROXIMATE PROJECT AREA



REFERENCE(S)

1. BASEDATA MNR/LIO OBTAINED APRIL 2019
2. IMAGERY: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
3. SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY

PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
VOTORANTIM CIMENTOS

PROJECT
**CALEDON QUARRY. VISUAL ASSESSMENT
 CALEDON, ONTARIO**

TITLE
VIEWPOINT LOCATIONS

CONSULTANT	YYYY-MM-DD	2022-08-16
GOLDER MEMBER OF WSP	DESIGNED	SO
	PREPARED	SO/PJM
	REVIEWED	CE
	APPROVED	HM

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APPENDIX E: Public Engagement Memo

CBM proposed Caledon Pit / Quarry – Engagement Summary

Completed Engagement to Date

Engagement with Indigenous Groups

A Notice of Project was sent by the Client to the following Indigenous communities on November 8, 2019:

- Huron-Wendat Nation
- Mississaugas of the Credit First Nation
- Métis Nation of Ontario
- Six Nations of the Grand River

The notice provided an overview of the proposed quarry in the Town of Caledon and welcomed each Indigenous community to meet with CBM in late 2019 early 2020 to discuss the project. The notice also highlighted that the CBM was planning initial public information sessions before the end of 2019 or early in the 2020 in the Caledon area to provide neighbours to the site an opportunity to ask questions. CBM welcomed each Indigenous community to attend these sessions as well. Finally, CBM provided the contact details (email addresses and phones numbers) of their North American Director of Land & Resources, Land and Resources Manager and their Land and Resources Coordinator.

In October 2020, the Haudenosaunee Confederacy Chiefs Council (HCCC) / Haudenosaunee Development Institute (HDI) were included in the Project's Indigenous engagement process. The following is a list of Indigenous engagement events that have taken place:

Event	Communication Method	Date	# Of Attendees	
Meeting with Huron-Wendat Nation (HWN)	Conference call	12-09-2019	CBM	2
			HWN	1
			Golder	3
			TOTAL	6
Meeting with Six Nations of the Grand River	In-person meeting	01-17-2020	CBM	3
			Six Nations	3
			Golder	3
			TOTAL	9
Meeting with Haudenosaunee Development Institute (HDI)	Conference call	02-18-2021	CBM	3
			HDI	3
			TOTAL	6
Meeting with Six Nations of the Grand River	Conference call	03-01-2021	CBM	3
			Six Nations	7
			TOTAL	10
Meeting with Mississaugas of the Credit First Nation (MCFN)	Conference Call	03-03-2021	CBM	3
			MCFN	7
			TOTAL	10
Meeting with Huron-Wendat Nation	Conference Call	03-05-2021	CBM	3
			HWN	2
			TOTAL	5
Meeting with Mississaugas of the Credit First Nation	Conference Call	03-24-2022	CBM	1
			MCFN	2
			Golder	1
			TOTAL	4

CBM proposed Caledon Pit / Quarry – Engagement Summary

Event	Communication Method	Date	# Of Attendees	
Site visit with Mississaugas of the Credit First Nation (MCFN) and Haudenosaunee Development Institute (HDI)	In person	10-17-2022	CBM	2
			MCFN	1
			HDI	1
			Golder	2
			TOTAL	6
Site visit with Huron-Wendat Nation (HWN)	In person	11-15-2022	CBM	2
			HWD	2
			Golder	1
			TOTAL	5
Site visit with Six Nations of the Grand River	In person	12-21-2022	CBM	TBD
			Six Nations	TBD
			Golder	TBD
			TOTAL	TBD

During the October 17, 2022 site visit, MCFN and HDI were provided an overview of the Project and were conducted a walk-through of natural features in the main extraction area. Discussions about significant woodlands, species-at-risk, non-significant woodland removal and mitigation measures for sensitive features also took place. Similarly, during the November 15, 2022, HWN was provide an overview of the Project, the approvals process, and the rehabilitation concept for the site. Email invitations were also extended to Mississaugas of the Credit First Nation (MCFN) to attend staking of the woodland/wetland features on September 28 and October 18, 2021.

Email invitations were extended to Métis Nation of Ontario (MNO), Huron-Wendat Nation, Haudenosaunee Development Institute (HDI), (HWN), Mississaugas of the Credit First Nation (MCFN) and Six Nations of the Grand River to attend the virtual information sessions.

The invitation to participate in the Stage 1 and 2 Archaeological Assessment (AA) fieldwork in the capacity of archaeological monitors and/or field liaison representatives was extended to MNO, HWN, HDI, MCFN, and Six Nations of the Grand River. Most communities (with the exception of MNO) deployed archaeological monitors and/or field liaison representatives while the Stage 1 and 2 AA fieldwork was conducted over 101 days between October 6, 2020 to October 5, 2022. Archaeological monitors from HDI and HWN were present for nearly each day during the fieldwork program. Monitors from Six Nations of the Grand River were frequently present, as staffing levels allowed. Due to MCFN council COVID-19 regulations, field liaison representatives from MCFN were deployed and present as staffing allowed in August and September 2021. When MCFN were unable to participate directly in the fieldwork, electronic updates were submitted regularly to MCFN's Field Data Portal. During the 2022 Stage 1 and 2 AA fieldwork, HWN, HDI, MCFN, and Six Nations of the Grand River were routinely on site.

Correspondence between Indigenous communities, CBM, and Golder on part of the Stage 1 and 2 AA was exchanged between January 2020 to September 2021 and again in May, September, and October 2022. In total, approximately 200 email exchanges occurred. MNO was copied on all general correspondence and but did not provide responses. The correspondence included regular email updates to each community regarding the progress of the Stage 1 and 2 AA. The emails provided details about the field crew, schedule, anticipated work methods, a reference map of the study area, and contact information. Community-led correspondence occurred on a daily or weekly basis and included the contact information of the

CBM proposed Caledon Pit / Quarry – Engagement Summary

archaeological monitor and/or field liaison representative. Other correspondence included the coordination of participation agreements, the communication of Golder's COVID-19 procedures and guidelines during the 2020 fieldwork season, and data requests (i.e., project mapping).

Additionally, the Stage 1 and 2 AA draft report was provided to each community for review. MCFN provided one comment which was addressed on site in 2022.

Engagement Events

Members of the public, municipal officials and interest groups were sent email and/or post mail invitations for notification of field work and virtual information sessions. The following is a list of engagement events that have taken place:

2019

- Summer 2019 – Initiated communication with local government representatives.
- Fall 2019 – Commenced engagement with Indigenous communities and local communities, and continued engagement with local government representatives.
 - This engagement with the local community included a letter mail out by CBM to approximately 2,100 addresses located around the site in November 2019. The letter introduced both CBM and the proposed Project. CBM notified recipients that they planned to initiate studies in November 2019 to evaluate the feasibility of submitting a licence application to the Ministry of Natural Resources and Forestry (MNRF). Additionally, the letter outlined that a public information session would take place where attendees could learn more about the Project and ask questions. Finally, recipients of the letter were welcomed to submit questions or comments and were asked to provide their contact details if they wanted to be added to the Project contact list. CBM provided the contact details (email addresses and phone numbers) of their North American Director of Land & Resources and their Land and Resources Coordinator.

2020

- Early 2020 – Continued meetings with Indigenous communities and notified local community regarding commencement of fieldwork.
- Spring 2020 – Invitation to approx. 2,100 addresses (the greater Caledon community) for a meeting with the local community and government representatives sent out but then postponed prior to it occurring due to COVID-19 restrictions.
- Summer/Fall 2020 – Notification to local community of field work via the Project website.

2021

- Throughout 2021, CBM held nine public consultation virtual information sessions with Caledon residents:
 - On March 9 and 11, CBM hosted three virtual meetings with neighbours living within about 1 km to the proposed project site. An invitation to these meetings was hand delivered and sent via email to neighbours located within about 1km from the property boundary of the site.
 - On April 7, CBM hosted a fourth meeting with the greater Caledon community. An invitation was delivered to approximately 2,100 addresses, sent to the resident contact list that had been accumulated to that point, and posted on our website.

CBM proposed Caledon Pit / Quarry – Engagement Summary

- Four additional meetings were held separately with Residents' Associations in Cataract, Alton, Caledon Village and Belfountain.
- On December 1, a virtual project update information session was hosted with members of the public. Invitations were delivered to the greater Caledon community (over 2,100 addresses), and via email to addresses that are in the project's contact list. The invitation was also published on the project website and emailed to other potentially interested parties.

2022

- In late summer 2022 CBM held a virtual information session with neighbours living closest to the proposed project site (i.e., within approx. 1 km) to present the work completed on the Traffic, Air, Noise and Blasting studies.

Project Website

A project website was established (www.CBMCaledonQuarry.ca) in 2019 that provides an overview of the project, the process of development and project announcements, and is continually updated when appropriate.

The website provides contact details for CBM personnel who oversee the project. These details include email addresses and a toll-free number so that the public can reach CBM directly.


The website contains a 'Talking to Our Community' section where previous presentations are available to download along with the recordings of the sessions.

Other reference material is available to consult including examples of previous CBM sites which have undergone rehabilitation.

Visitors to the website can access a page of Frequently Asked Questions (FAQs). The FAQ page is updated in accordance with public queries received in both the information sessions and general correspondence.



CBM proposed Caledon Pit / Quarry – Engagement Summary



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Talking to Our Community

September 2022 Near Neighbour Update

CBM hosted a virtual project update information session on September 7, 2022 with neighbours located within 1km of the Project location to provide an update on the proposed Project.

CBM would like to thank the neighbours that attended the virtual information session for your participation and for your questions and comments. The intent of the meeting was to provide an update on the proposed Project with regards to the potential extraction area, and results from the traffic, noise, blasting, and air studies, and answer questions about the proposed Project. We hope that we answered any questions that you may have at this stage and we look forward to continued dialogue with you as the technical studies come to a conclusion and the application is finalized and submitted.

A copy of the presentation provided at this meeting can be found at the link [here](#).

A recording of the presentation provided at the near neighbour meeting held on September 7, 2022 can be watched below.

representatives since summer of 2019, and with the public and Indigenous communities since the fall of 2019.


Contact Us

Your input is an important part of the planning process. Details of public information sessions and opportunities for input will be posted on the Talking to Our Community page as they are scheduled. If you'd like to join our mailing list, have questions, or would like to provide comments please contact us. We look forward to hearing from you!


David Hanratty, P.Ge.
Director of Land, Resources and Environment, North America
Email: David.Hanratty@vcimentos.com
Phone: (705) 930-6180

Mike Le Breton
Land & Resources Manager, Eastern Ontario
Email: Mike.Lebreton@vcimentos.com
Phone: (905) 410-2900

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REQUISITE PLANNING PROCESS FOR AN AGGREGATE LICENCE



PLANNING ACT OFFICIAL PLAN AND ZONING BY-LAW AMENDMENT PROCESS							
Preconsultation with the Region, Conservation Authority, and Town	Preparation of all Required Technical Reports	Application Submitted to the Town	Town circulates the application to departments and agencies for review	Town Council meeting/public meeting	CBM wants to address comments and check back with the community prior	Town staff releases all information and prepares a report and recommendation to approve or deny the application	Council makes a decision
<p>• Approval is required from the Town for amendments to the Official Plan and Zoning By-law</p> <p>• The Town will circulate the application to the Region, the Conservation Authority, Town Departments and other agencies for review.</p> <p>• Council will host a public meeting to discuss the application.</p> <p>• The planner will evaluate the application based on Provincial Policy directives, policy directives in the regional and local Official Plans, technical submissions, feedback from circulated departments and agencies and from the public.</p> <p>• Council takes all factors into consideration and approves or denies the application.</p> <p>• The decision of Council is subject to appeal within 20 days of the decision.</p>							

CBM proposed Caledon Pit / Quarry – Engagement Summary

- The Town will circulate the application to the Region, the Conservation Authority, Town Departments and other agencies for review.
- Council will host a public meeting to discuss the application.
- The planner will evaluate the application based on Provincial Policy directives, policy directives in the regional and local Official Plans, technical submissions, feedback from circulated departments and agencies and from the public.
- Council takes all factors into consideration and approves or denies the application.
- The decision of Council is subject to appeal within 20 days of the decision.

AGGREGATE RESOURCES ACT (ARA): LICENCE APPLICATION PROCESS (Ministry of Natural Resources and Forestry - MNRF)

Preconsultation with MNRF	Preparation of Technical Reports, Site Plans and Summary Statement	Application Submitted to MNRF	Application deemed complete by MNRF; notice is posted on the Environmental Registry (ENR)	CBM initiates the notification and consultation process (required water to residents, sign on property, notice in local newspapers)	CBM works to address comments and resolve issues raised during the comment period	At the end of the 2 year process or before (2 Month), CBM documents the process and submits to MNRF	MNRF makes a decision on the application. Where there are unresolvable objections, MNRF refers the application to LPAT
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- Application preparation usually takes a minimum of 1 year to complete the required technical reports and prepare a draft set of Site Plans.
- The ARA has a 45 day "Notification and Consultation Process" during which a Public Information Session must be held. Anyone can submit comments or objections during the 45-day review.
- The applicant has up to 2 years to address comments and try to resolve issues. At the end of the 2 years, if objections still remain, the application can be referred to the Local Planning Appeal Tribunal (LPAT) – an adjudicative tribunal that hears cases in relation to a range of land use matters.
- If all issues are resolved, the MNRF will issue a Licence subject to Zoning being in place.

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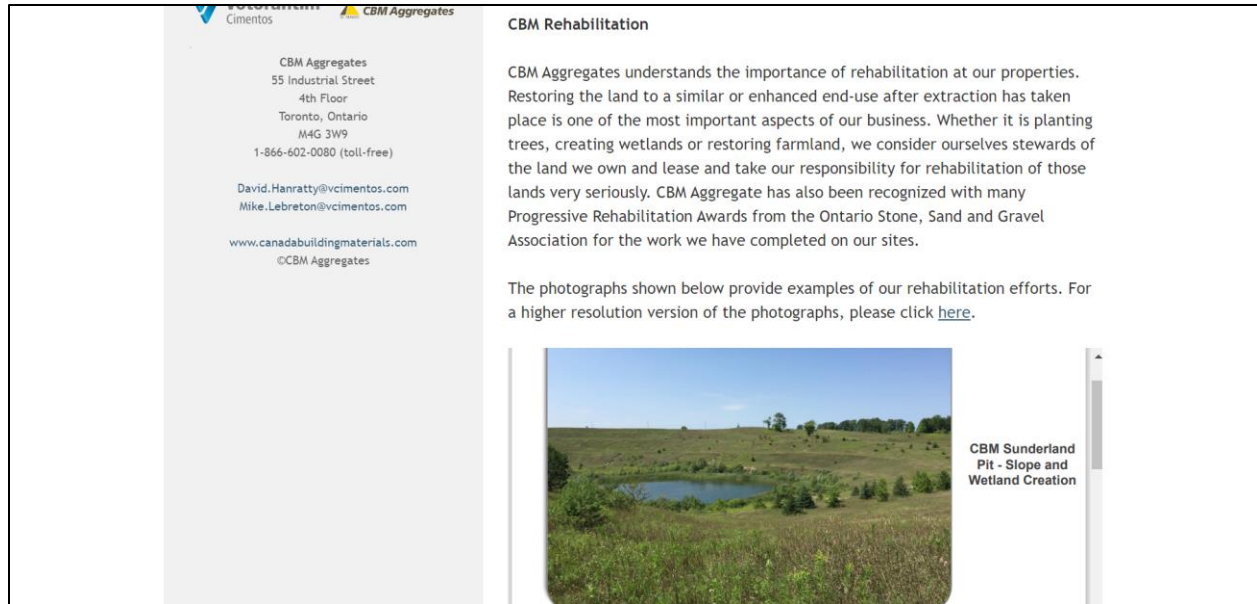
Frequently Asked Questions (FAQs)

CBM has prepared responses to FAQs that were raised during the virtual public meetings held in March/April 2021 and other consultation completed for the proposed project. The FAQs have been grouped by topic. Please click on each of the topics below to see the FAQs associated with that topic.

CBM is currently sorting through the questions received during the December 2021 virtual information session, and will update the FAQs in the coming weeks to address the questions received at the session.

Company Overview	+
Project Overview	+
Aggregate Extraction Process	+
Technical Studies	+
Groundwater (Hydrogeology)	+
Surface Water Resources and Natural Environment	+

CBM proposed Caledon Pit / Quarry – Engagement Summary



Dedicated Project Email

A project email address was created (CBMCaledonQuarry@golder.com) to track outgoing and incoming communications relevant to the Project.

All correspondence with the public is tracked in a record of engagement.

Future Engagement

CBM is committed to engaging with the community and members of the public, as well as staff from agencies, the Town, and members of Council throughout the planning and ARA processes. The following steps are proposed at a minimum to ensure continued dialogue and openness in order to ensure the public is kept informed and their feedback is provided to CBM:

- Once the development applications are formally submitted, one or more informal public meetings / PICs / Open Houses may be convened to continue to inform the public, to provide information / updates, and to provide opportunity for feedback/ Q&A
- The CBMCaledonQuarry web site will be updated to reflect the application status, notice(s) of upcoming meetings, updates to FAQs, and will include copies of Technical Reports once finalized; and
- The Statutory Public Meeting will occur with Caledon Planning Committee/Council (date TBD).

A plan to engage the public early and as frequently as required will lead to a clearer understanding by members of the public of the process and details of the applications and will assist CBM in understanding any comments or concerns as the applications advance through the process. The proposed strategy for consulting with the public with respect to the application will exceed the requirements of the Planning Act for statutory meetings and the Aggregate Resources Act.

APPENDIX F:

Curriculum Vitae – Karen Bennett

Karen A. Bennett, MCIP, RPP

EDUCATION

Queen's University, Kingston, Ontario - Master of Urban and Regional Planning ■ 1998

University of Guelph, Guelph, Ontario – Honours Bachelor of Arts (Major in Geography; Minor in Sociology) ■ 1996

EMPLOYMENT HISTORY AND EXPERIENCE

GLEN SCHNARR & ASSOCIATES INC. – Partner: Jan 2022 - Present
Urban and Regional Planners, Land Development Consultants, Mississauga, Ontario

GLEN SCHNARR & ASSOCIATES INC. – Senior Associate: 2017 – Present
Urban and Regional Planners, Land Development Consultants, Mississauga, Ontario

GLEN SCHNARR & ASSOCIATES INC. – Associate: 2009 – 2017
Urban and Regional Planners, Land Development Consultants, Mississauga, Ontario

GLEN SCHNARR & ASSOCIATES INC. – Senior Planner; 2003 – 2009
Urban and Regional Planners, Land Development Consultants, Mississauga, Ontario

GLEN SCHNARR & ASSOCIATES INC. – Planner; 1999 – 2003
Urban and Regional Planners, Land Development Consultants, Mississauga, Ontario

GLEN SCHNARR & ASSOCIATES INC. – Junior Planner; 1998 -1999
Urban and Regional Planners, Land Development Consultants, Mississauga, Ontario

- Provide professional planning and project management services related to Official Plan Amendments, Secondary Plan Amendments, Zoning By-Law Amendments, Plans of Subdivision, Site Plan Approvals, Committee of Adjustment and Land Division Committee applications, policy initiatives and special agency permits;
- Liaise with public agencies to facilitate development approvals;
- Represent client interests before Municipal Council, Committees and Commissions, and Local Planning Appeal Tribunal/Ontario Land Tribunal.

MEMBERSHIPS

Full Member (since 2004), *Canadian Institute of Planners*

Full Member (since 2004), *Ontario Professional Planners Institute*

Member of Land Use Committee (2010-2019), *Ontario Stone, Sand & Gravel Association (OSSGA)*

APPENDIX G:

Curriculum Vitae – Brian Zeman



CURRICULUM VITAE

Brian A. Zeman, BES, MCIP, RPP

Brian Zeman, President of MHBC, joined MHBC as a Planner in 1998 after graduating from the University of Waterloo with a Bachelors Degree in Urban and Regional Planning.

Mr. Zeman provides planning services for all aspects of the firm's activities including residential, commercial and industrial uses while specializing in aggregate resource planning. He has experience in aggregate site planning and licensing and processes relating to aggregate applications.

Mr. Zeman is a member of the Canadian Institute of Planners and Ontario Professional Planners Institute.

EDUCATION

1998
Bachelor of Environmental Studies,
Honours, Urban and Regional
Planning, University of Waterloo

PROFESSIONAL ACCREDITATIONS / ASSOCIATIONS

- Full Member, Canadian Institute of Planners
- Full Member, Ontario Professional Planners Institute
- Member, Ontario Expropriation Association
- Certified by the Province of Ontario to prepare Aggregate Resources Act Site Plans

PROFESSIONAL HISTORY

- 2014 - Present **President**, MacNaughton Hermsen Britton Clarkson Planning Limited
- 2010 - 2014 **Vice President and Partner**, MacNaughton Hermsen Britton Clarkson Planning Limited
- 2005 - 2009 **Partner**, MacNaughton Hermsen Britton Clarkson Planning Limited
- 2004 - 2005 **Associate**, MacNaughton Hermsen Britton Clarkson Planning Limited
- 2001 - 2004 **Senior Planner**, MacNaughton Hermsen Britton Clarkson Planning Limited
- 1998 - 2001 **Planner**, MacNaughton Hermsen Britton Clarkson Planning Limited

CONTACT

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F 705 728 2010
bzeman@mhbcplan.com
www.mhbcplan.com

CURRICULUM VITAE

Brian A. Zeman, BES, MCIP, RPP

PUBLICATIONS

- Co Author of the “State of the Aggregate Resource in Ontario Study Paper 2 – Future Aggregate Availability & Alternatives Analysis, Prepared for the Ministry of Natural Resources dated December 2009.

SELECTED PROJECT EXPERIENCE

- Research, preparation and co-ordination of reports / applications under the Planning Act, Niagara Escarpment Planning and Development Act, Oak Ridges Moraine Conservation Act, and the Aggregate Resources Act.
- Facilitate public meeting on major development applications.
- Project management for major development applications.
- Undertake aggregate Compliance Assessment Report inspections and preparation of reports.
- Planning evaluations and analysis for mineral aggregate development and resource management.
- Conduct notification and consultation procedures under the Aggregate Resources Act.
- Aggregate Resources Act site plan amendments.
- Planning evaluations for residential developments.
- Registration and planning of residential developments.
- Planning assessment for commercial, retail, office and industrial developments.
- Restoration planning for pits and quarries and preparation of recreational afteruse plans.
- Research and preparation of reports /evidence for hearings before the Ontario Municipal Board, Environmental Review Tribunal, Joint Board.
- Provide expert planning evidence before the Ontario Municipal Board, Environmental Review Tribunal and the Joint Board.

CONTACT

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bzeman@mhbcplan.com
www.mhbcplan.com

CURRICULUM VITAE

Brian A. Zeman, BES, MCIP, RPP

SAMPLE PROJECT LIST

- Activa Group - Laurentian Subdivision, Kitchener
- Adventure Farm – Kirkwall Subdivision, Hamilton
- Aecon - Oliver Pit - Site Plan Amendment/Compliance Assessment Report
- Aggregate Producers Association of Ontario - Caledon Official Plan
- Aggregate Producers Association of Ontario - PPS Review
- Aggregate Producers Association of Ontario - Region of Halton Official Plan
- Blue Mountain Aggregates-Pit Deepening and Expansion
- Brampton Brick - Cheltenham Quarry Site Plan Amendment
- Brampton Brick - Niagara Escarpment Development Permit
- Cayuga Material & Construction - Property Investigation
- Cliff's Natural Resources – Chromite Aggregate Project
- Crisdawn Construction Inc. – Barrie Annexation Lands
- Dufferin Aggregates - Acton Quarry Afteruse Plan
- Dufferin Aggregates - Acton Quarry Expansion
- Dufferin Aggregates – City of Hamilton Official Plan
- Dufferin Aggregates - Milton Comprehensive Zoning By-law
- Dufferin Aggregates - Milton Quarry Afteruse Plan
- Dufferin Aggregates - Milton Quarry Extension
- Dufferin Aggregates - Property Investigations
- Dufferin Aggregates - Region of Halton Official Plan
- Dufferin Aggregates - Town of Halton Hills Official Plan
- Dufferin Aggregates – Town of Halton Hills Zoning By-law
- E.C. King Contracting - Sydenham Quarry Expansion Erie Sand & Gravel - Pelee Quarries
- Gies Construction - Old Chicopee Drive, Waterloo
- Hazad Construction - Conestoga Golf Course Subdivision Hallman Construction Limited - Consent for Church Site
- Home Depot - Barrie, Kitchener, Markham, Mississauga, Richmond Hill and Whitby
- J.C. Duff - Property Investigations
- Kulmatycky Rezoning/Plan of Subdivision/Area Study - Town of Paris
- Lafarge Canada – Brechin Quarry Site Plan Amendment
- Lafarge Canada – City of Hamilton Official Plan
- Lafarge Canada - Dundas Quarry Expansion
- Lafarge Canada - Lawford Pit
- Lafarge Canada – Limbeer Pit
- Lafarge Canada – Mosport Pit Site Plan Amendments
- Lafarge Canada - Oster Pit

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 bzeman@mhbcplan.com
 www.mhbcplan.com

CURRICULUM VITAE

Brian A. Zeman, BES, MCIP, RPP

- Lafarge Canada - Property Investigations
- Lafarge Canada - Warren Merger Due Diligence
- Lafarge Canada-Wawa Site Plans
- Lincoln Village Subdivision - Phase 2 and 3, Waterloo
- Livingston Excavating - Simcoe Pit
- Nelson Aggregates Co., Burlington Quarry Extension
- Ontario Stone, Sand & Gravel Association – Region of Halton Aggregate Strategy
- Ontario Stone, Sand & Gravel Association - Region of Halton Official Plan
- Paris Land Development Limited - Subdivision
- Pitway Holdings - Brillinger Pit
- Pitway Holdings - Naylor/Forman Pit
- Pine Valley Homes - Ainsley Estates, Town of Wasaga Beach
- Pioneer Construction-Aggregate Resources Act Licensing-Thunder Bay
- Region of Durham - Homefounders Subdivision Riverbank Estates Inc. - Subdivision, Kitchener
- St. Marys Cement – Alternative Fuels
- St. Marys Cement - Bowmanville Quarry Deepening
- St. Marys Cement - Bowmanville Quarry Site Plan Amendment
- St. Marys Cement - Clarington Comprehensive Zoning By-law
- St. Marys Cement – Westside Marsh Project
- Steed & Evans - Contractor's Yard/Site Plan Amendment
- Tanem Developments - Bridge Street Subdivision University of Guelph - Canadian Tire
- University of Guelph - Commercial Centre University of Guelph - Office/Research Park
- YMCA – Redevelopment of Site, Barrie
- Zavarella Construction Ltd. - Consent/Rezoning/Plan of Subdivision/Area Study, Town of Paris

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