

# Clarington

August 22, 2020

Client Services and Permissions Branch  
Ministry of Environment, Conservation and Parks  
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Toronto, ON M4V 1P5

Email: [enviropemissions@ontario.ca](mailto:enviropemissions@ontario.ca)

Dear Sir/Madam:

Re: Municipality of Clarington Comments  
St. Marys Cement – Bowmanville Site  
Application for Amendment to Environmental Compliance Approval No.  
0469-9YUNSK (ERO Number 019-2055)

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Please accept this letter as the comments of the Municipality of Clarington with respect to the application submitted by St. Marys Cement (SMC), a company of Votorantim Cimentos North America, for an amendment to Environmental Compliance Approval (ECA) Number 0469-9YUNSK to expand their current use of Alternative Low Carbon Fuel (ALCF) as an energy source for their Bowmanville Cement Plant (the Site). The subject application has been prepared under Ontario Regulation 79/15 of the Environmental Protection Act, which sets out the environmental permitting process and requirements for energy-intensive industries, such as cement manufacturers, to use ALCF in place of carbon dioxide emission intensive fossil fuels (i.e. coal and petroleum coke).

SMC currently has an ECA to use woody materials as an ALCF at the Site. In 2018, SMC undertook a pilot project to demonstrate and further assess the potential impacts of the use of other types of ALCF. This proposal builds from the results of the demonstration project and seeks to expand the use of ALCFs at the Site from the current 100 tonnes of ALCFs used per day to 400 tonnes of ALCFs per day (approximately 30% thermal replacement of the conventional fuels used at the Site), as well as the types of ALCFs used. In addition, SMC is seeking to install new equipment and to increase the ALCF storage capacity to accommodate the expansion.

The Municipality of Clarington has reviewed the application and documentation submitted by SMC in support of the application. Posting of the application details for comment has occurred during the Municipality's summer recess of Council. As such, the comments provided herein are those of staff and do not represent the position of Council. As described further in the Air Quality and Cumulative Effects section of this comment letter, the Municipality is in the process of retaining technical expertise in air quality to provide advice and recommendations to Council in relation to this proposal.

The Corporation of the Municipality of Clarington, 40 Temperance Street, Bowmanville, ON L1C 3A6  
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We anticipate that the Technical Expert will report to Council in October 2020, after which further comments will be submitted to the Ministry of Environment, Conservation and Parks (MECP).

### **Greenhouse Gas Emissions Reduction**

A key objective of the proposal is to reduce SMC's greenhouse gas emissions. In 2018, the Municipality completed a community greenhouse gas emissions inventory update for the 2015 reporting year to track progress from the baseline year of 2007. This included for the first-time supplemental reporting of the contribution of large industrial emitters in Clarington. The inventory update found that the combustion of coal and petroleum coke by SMC at the Site represented nearly 25 per cent of total 2015 community emissions, while process emissions generated from lime calcination and feed oxidation processed at the Site represented 52 per cent of the total 2015 community emissions.

In March 2020, the Municipality joined over 400 Canadian municipalities and 1300 local governments in 25 countries in declaring a Climate Change Emergency. This declaration confirms and prioritizes the Municipality's commitment to protecting our economy, ecosystems and community from climate change through the reduction of greenhouse gas emissions and building resilience. The greenhouse gas emissions footprint of the community is significantly influenced by SMC. The Municipality supports the objective of greenhouse gas emissions reduction at the Site.

As required by O.Reg. 79/15, SMC has submitted a Carbon Dioxide Emission Intensity Report in support of the application. The results of the analysis showed that the ALCFs tested have significantly lower carbon dioxide emission intensity values than samples of conventional fuels taken from the Site. The Carbon Dioxide Emission Intensity Report does not account for other factors that will change the greenhouse gas emissions profile for the Site. A lifecycle analysis approach should take into consideration the net effect on greenhouse gas emissions generated from the transport of fuel (conventional versus ALCF) to the Site, the emissions released from the consumption of fuel at the Site, and the transportation and disposal of materials removed from the Site as a result of pre-screening.

SMC is required by Ontario Regulation 390/18 to report their greenhouse gas emissions annually and to have third-party verification of their annual emissions report. While the publicly available data reports the amount of greenhouse gases (carbon dioxide equivalent) emitted by SMC from the combustion of biomass, the available data does not provide for an on-going demonstration of the carbon dioxide emissions intensity reduction that is being achieved or the contribution to any established greenhouse gas reduction targets that the facility is trying to achieve.

It is understood that a fuel testing program to regularly monitor the carbon dioxide intensity of the ALCF used at the Site will be implemented. However, we request clarification on the frequency of this analysis and the mechanism for reporting. In addition to regular, publicly available reporting to demonstrate whether the objectives of

the ALCF legislation are being met or exceeded, we request that SMC share with the community the contribution that the use of ALCF has on reducing total annual greenhouse gas emissions from the Site using a baseline established before the practice of using ALCF as a fuel source.

### **Land Use, Zoning and Site Development**

The Site is designated “Aggregate Extraction Area,” “General Industrial Area,” “Environmental Protection Area”, and “Special Policy Area C” in the Clarington Official Plan and zoned “M3-1 (Extractive Industrial Special Exception 1)” and “M3-2 (Extractive Industrial Special Exception 2)” in Comprehensive Zoning By-law 84-63. These documents permit a cement manufacturing facility, quarry, and uses that are ancillary to the manufacturing facility and quarry on the Site. The uses proposed by the subject application are considered ancillary to the cement manufacturing facility and are therefore permitted by the Official Plan and Zoning By-law.

In addition to the adjacent land uses identified in the ECA application submitted by SMC, it is important to note that there are residential and recreational areas in immediate proximity to the SMC Site. The Site is located within the Bowmanville Urban Area of Clarington.

The documentation submitted to the MECP to support the subject application provides minimal details relating the proposed changes to existing on-site buildings and structures. In addition, some inconsistencies in the information related to ALCF buildings and structures were noted and as a result, it is not clear whether the construction of a new, secondary ALCF building is proposed.

SMC has a Site Plan granted under Section 41 of the Planning Act that applies to the existing ALCF building. An expansion to the existing ALCF building and/or the erection of a new building/structures will require amendment of the Site Plan Approval issued for the ALCF building and the issuance of building permits pursuant to the Ontario Building Code.

### **ALCF Sources and Supporting Regional Waste Management Objectives**

The proposal does not indicate the service area from within which ALCF will be sourced. While the Municipality appreciates the potential benefits to SMC of having flexibility in this regard, we do not support Clarington becoming a location of convenience for waste diversion of Ontario’s Industrial, Commercial and Institutional sectors.

Clarington is the host community for the Durham York Energy Centre (DEYC), where all of Durham Region’s residential waste and a portion of waste generated by households in York Region is disposed of. Significant growth rates in Durham Region have contributed to the DEYC reaching capacity sooner than originally estimated. To free-up capacity and postpone the need for expansion of the DEYC, the Region of Durham is pursuing the development of a mixed waste pre-sort and anaerobic digestion facility,

also sited in Clarington. From a community benefits standpoint, the Municipality strongly encourages SMC to identify opportunities to collaborate with the Region of Durham to achieve the objective of using ALCF and reduce the need for expansion of the DYEC.

### **ALCF Receipt, Processing and Storage**

The introduction of O.Reg. 79/15 provided a streamlined approvals process for the use of ALCF for Ontario's cement sector. Changes included the removal of the requirements for proponents to obtain a waste ECA for disposal sites. Information that would typically be clearly described by proponents in a waste ECA application for a site to manage and process waste (e.g. maximum daily or annual receiving limits; maximum storage capacity limits) is not clearly indicated in the subject application or supporting documents. This makes it difficult to fully understand the actual scale of the proposed operations.

The application is seeking approval to increase the daily throughput of ALCF at the Site to 400 tonnes. However, the *Alternative Low Carbon Fuel Handling Procedures and Testing Manual* (St. Marys Cement, March 2020) indicates that the ALCF system will have a feeding system designed with a feed rate of up to 10 tonnes per hour. At this feed rate, the maximum quantity of ALCF throughput that could be achieved over a 24-hour period is 240 tonnes. How will the additional throughput be achieved?

While the application indicates that SMC is seeking approval for new equipment to support the ALCF, few details are provided. The Municipality requests confirmation that all new equipment proposed to support the ALCF expansion has been considered in the assessment of air and noise requirements and potential impacts associated with the proposal. This includes the new conveyance system to the kiln burner, pre-processing rotary cutter and drum or belt magnetic separator that have been referenced in the supporting documents to the application.

The *Emission Summary and Dispersion Modelling Report* (BCX Environmental Consulting, March 2020) indicates that unloading of ALCF will be a completely enclosed process. How is ALCF feedstock inspection occurring to remove undesirable materials or reject undesirable loads if there is direct feed to the conveyor?

Clarification on proposed ALCF storage at the Site is requested in order to provide fulsome comments. A maximum six-month storage duration for any one load is proposed; however, the maximum quantity of ALCF to be stored at any one time is not known. The *Alternative Low Carbon Fuel Handling Procedures and Testing Manual* (St. Marys Cement, March 2020) indicates that there may be outdoor storage. The proposed location for this is not clearly indicated in any of the supporting documents. Outdoor storage raises questions about how ALCF moisture levels, run off, and potential nuisance impacts, such as litter and odour, would be managed. The Municipality does not support the outdoor, unclosed storage of ALCF. Further, Darlington Creek, which crosses the Site, is in close proximity to the existing ALCF

building and portions of the Site are within the regulatory limits of the Conservation Authority. Consultation with CLOCA should be undertaken.

### **Traffic Impacts**

The application has considered the potential impacts of the additional traffic to/from the Site relating to the delivery of ALCF. As noted in the *Traffic Impact Study* (AECOM, January 2020), the increased number of trucks will have a negative impact on the adjacent intersections. These intersections are already at capacity, so any additional traffic will make the condition worse.

The intersections that are studied are all under the jurisdiction of the Ministry of Transportation (MTO). SMC should consult with MTO regarding the operation of these intersections.

The Municipality will be undertaking rehabilitation of the Bowmanville Avenue bridge over the Canadian National Railway line in the fall of 2020 and spring/summer 2021. We have been in consultation with SMC through the design. There will be temporary traffic signals to control traffic through the construction zone and the intersection of Bowmanville Avenue and Energy Drive. This will cause disruption of traffic to SMC during construction.

The work will include permanent widening of the sidewalk on the west side of Bowmanville Avenue and removal of the northbound left turn lane at the intersection of Bowmanville Avenue and Energy Drive. There will be only a northbound through-left lane. The southbound lanes will be permanently changed to include a southbound through lane and a southbound right turn taper.

The increased heavy truck traffic will impact the lifespan of the infrastructure on Bowmanville Avenue and will increase the lifecycle cost of maintaining the road and bridge in good condition.

MTO is currently doing design work for the rehabilitation of Bowmanville Avenue over Highway 401 with construction to take place in the next couple of years. This will result in significant traffic disruption during construction. MTO is considering options for permanent operational improvements at the Bowmanville Avenue interchange, which may include signals at the intersections of Bowmanville Avenue at Energy Drive and Energy Drive at the Highway 401 ramps. They are also considering extending the Highway 401 eastbound off ramp.

The *Traffic Impact Study* (AECOM, January 2020) is based on an anticipated increase in two-way trips of up to 35 per day. This is based on the assumption that 7 days of material will be delivered over 4 days and that the deliveries will be spaced out through the day similar to existing traffic patterns. SMC should confirm that this assumption is correct since any spike in traffic would have additional impact on the affected intersections and should be part of the discussions with MTO.

## Air Quality and Cumulative Effects

The Municipality appreciates the work undertaken by SMC to complete the additional supporting *Air Quality Study and Cumulative Effects Assessment* (BCX Environmental Consulting, January 2020). We request that air quality and the cumulative effects of the proposal on the community be a key consideration as part of a thorough and comprehensive assessment by the MECP. Is the advancement of greenhouse gas reduction being achieved at the cost of impacted air quality or community health?

This proposal is only one of two environmental permitting processes that are now underway within Clarington involving the thermal treatment of municipal solid waste. The Site is located approximately 4 km east of the DYEC, which is undergoing a concurrent Environmental Screening Process to increase processing capacity from 140,000 to 160,000 tonnes per year. Council and residents have concerns with the potential cumulative effects of these projects within what is perceived to be an already burdened airshed. Questions have also been raised about specific contaminants of concern, including fine particulate matter (PM2.5), dioxins and furans, nitrogen oxides (NOX), sulphur dioxide (SO2), and Benzo(a)pyrene. Further, the allowance for the industry to use emissions trading for sulphur dioxide and nitrogen oxides has seen the Site benefit from other locales in Ontario.

Given the technical complexity of the air quality aspects of the subject application and the on-going Environmental Screening Process for the DYEC, it is difficult for Council members and staff to understand the inter-relationships between the project requirements, their potential cumulative effects, and the adequacy of their respective monitoring programs and overall ambient air quality monitoring for the area. As such, in accordance with Council direction, staff are in the process of seeking independent, technical expertise to provide advice and assist with interpretation and commenting. We anticipate that the Technical Expert will report to Council in October 2020, after which further comments will be submitted to the MECP on the subject application.

While we understand that a key objective of the use of ALCF in the cement sector is the reduction of greenhouse gas emissions rather than providing a waste management solution, we cannot discount the fact that this proposal would result in a substantial amount of waste being brought to the Municipality for final disposal by means of a thermal treatment process. Accordingly, the Municipality expects SMC will ensure the facility incorporates and utilizes modern, state of the art, emissions control technologies that meet or exceed provincial standards for the protection of human health and the environment. The Site should be required to meet the most current and stringent air emissions levels, and not be grandfathered as “existing.”

Details on how the air emissions from the facility will be monitored and reviewed is important to community understanding of the proposal. The application does not include details about the frequency and scope of continuous emissions monitoring, on-going source testing or ambient emissions monitoring proposed for the Site. These details are requested, including information on the application of *Ontario's Guideline A-7: Air Pollution Control, Design and Operation Guidelines for Municipal Waste Thermal*

*Treatment*, to the project, as well as a comparison of the proposed air quality monitoring program for the Site to the requirements of the DYEC. The Municipality requests the opportunity to review and seek clarification on the air quality monitoring program and related requested information prior to MECP making a decision on the ECA amendment application.

In addition to SMC's existing ambient air quality monitors, a network of air monitoring stations is present in the vicinity of the property, including ambient air monitoring equipment for the DYEC and a long-term ambient air monitoring station at the Durham College Oshawa Campus. Data is also available for temporary ambient air monitoring stations installed as part of the Highway 407/418 construction. These monitoring stations contributed to the completion of a review of local air quality undertaken by the MECP in 2018. MECP's *Technical Memorandum: Overview of Ambient Air Monitoring Programs in Durham Region* summarizes the analysis of air quality data in the Region for years 2013 to 2016. The Municipality requests MECP undertake an updating of this report to include data to 2020, with regular updating thereafter.

Other, more specific, preliminary comments based on the initial review of air quality reports submitted in support of the subject application are as follows:

- The *Emission Summary and Dispersion Modelling Report* (BCX Environmental Consulting, March 2020), completed a portion of the analysis using a designation of the site as being in a rural setting. The Municipality is concerned with this determination. As indicated, the Site is located with the Bowmanville Urban Area of Clarington. A residential neighbourhood comprised of approximately 100 households is located directly east of the property along the Lake Ontario shoreline, and extensive residential neighbourhoods exist immediately north of the Site, on the north side of Highway 401. In addition, commercial and mixed-use areas, a designated Major Transit System Area, and both the East Bowmanville and South Bowmanville Industrial Parks are located within a 3 km radius of the property boundary (see enclosed map).
- The generation of PM<sub>2.5</sub> by SMC and the DYEC has been an on-going concern of Council. While previous presentations by SMC to Council have indicated that the contribution of PM<sub>2.5</sub> to the community by the Site is low, the *Emission Summary and Dispersion Modelling Report* (BCX Environmental Consulting, March 2020) identifies PM<sub>2.5</sub> as a primary emission from the facility. As stated, the Municipality requests that ambient air monitoring for the Site be consistent with that of the DYEC, including PM<sub>2.5</sub>.
- The *Air Quality Impact Study and Cumulative Effects Assessment* (BCX Environmental Consulting, January 2020) uses the current sulphur dioxide Ambient Air Quality Criteria value of 690 ug/m<sup>3</sup>. Air standards for sulphur dioxide were updated in 2018. While a phase in period is currently underway, the new standards will take effect in less than three years. To align with the conservative approach that has been taken with the analysis completed by SMC, to address community concerns, and recognizing the new standard will come into effect in

sequence with or very soon after the potential start-up of expanded operations, the Municipality requests that the most current standards be used.

- The following discrepancies in data amongst the supporting documents have been identified:
  - Differing clinker production rates of 1.8 million tonnes per year [*Carbon Dioxide Emission Intensity Report* (Golder Associates, January 2020) and the *Air Quality Study and Cumulative Effects Assessment* (BCX Environmental Consulting, January 2020)] and 2.4 million tonnes per year [Alternative Low Carbon Fuels Handling Procedures and Testing Manual (St. Marys Cement, March 2020)].
  - Differing maximum production rates of 5500 tonnes per day [*Air Quality Study and Cumulative Effects Assessment* (BCX Environmental Consulting, January 2020)] and 5800 tonnes per day [*Carbon Dioxide Emission Intensity Report* (Golder Associates, January 2020)].

### **Consultation and Complaints Management**

An extensive consultation program was carried out by SMC as part of preparing the ALCF permit application. Timing of the release of the final supporting documents for the proposal, which coincided with the onset of the COVID-19 pandemic, effected our ability to complete our review and submit comments to the MECP and SMC prior to the Environmental Registry deadline and influenced in part the hiring of air quality technical expertise. As previously mentioned, we anticipate submitting additional comments to the MECP.

As SMC continues through the permitting process, we would like to see on-going active engagement and education of the community about ALCF including, potential benefits of ALCF use, potential environmental and nuisance impacts mitigation, monitoring and measuring that will occur, and how questions and concerns can be communicated and addressed. Continuation and regular updating of the project website, along with on-going engagement of the St. Marys Cement Community Relations Committee are ideal forms for this to occur.

Further, the Municipality requests that a complaints management and resolution protocol be documented and made publicly available. This has been a requirement of many significant undertakings in the community and helps to clearly and openly communicate to the public a company's commitment to open dialogue with the community and to hearing and addressing concerns.

More specifically with respect to nuisance odour complaints management, the Municipality encourages SMC become involved in the odours management stakeholders group being led by the Region of Durham in collaboration with other waste management and large industrial operators in the South Courtice / South Bowmanville area of Clarington, including Covanta, Miller Waste Systems, Ontario Power Generation and Waste Management (of Canada). While the purpose of using ALCFs at the Site is not waste disposal, the quantities of waste that will be managed are comparable and



possibly greater than other nearby facilities. We anticipate public perception of nuisance impacts, including odour, may arise in the community as a result of the project.

### **In closing**

Thank you for the opportunity to provide comments on the application by St. Marys Cement under Alternative Low Carbon Fuels Regulation O.Reg. 79/15 relating to their cement manufacturing operations in Clarington. Additional comments from the Municipality will be submitted to MECP and SMC once our consultant has had time to review and provide advice and recommendations to Council. We request to continue to be advised about the project and opportunities to comment and provide input and will continue to track its progress.

Should you have any questions on the contents of this letter or require any further information from us, please contact Amy Burke, Acting Manager – Special Projects Branch at 905-623-3379 Ext. 2423 or [aburke@clarington.net](mailto:aburke@clarington.net).

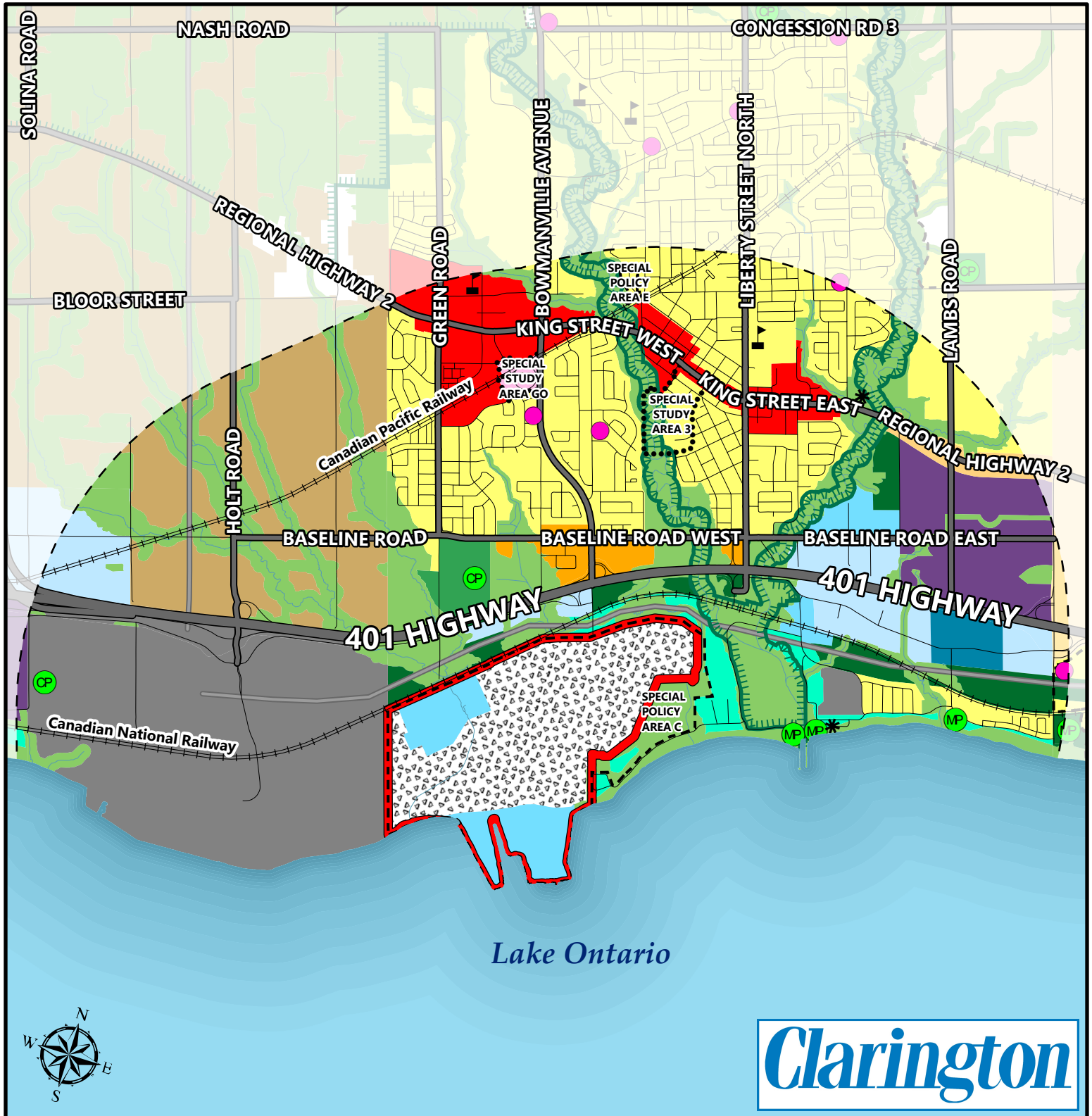
Sincerely,



Faye Langmaid, RPP, FCSLA  
Acting Director of Planning and Development Services  
Municipality of Clarington

Cc: Mayor and Members of Council  
CAO and Director of Public Works  
Ruben Plaza, Environmental Manager – Canada, St. Marys Cement  
Sarah Schmied, Project Manager, Golder Associates Ltd.  
Celeste Dugas, MECP, York-Durham District Office  
Philip Dunn, MECP, York-Durham District Office  
Kim Lendvay, MECP, York-Durham District Office  
Susan Siopis, Commissioner of Works, Regional Municipality of Durham

Enclosure



## Official Plan Land Use within 3Km of St. Marys Cement

- |                      |                           |                          |                     |
|----------------------|---------------------------|--------------------------|---------------------|
| St. Marys Cement     | Secondary School          | Business Park            | Prime Agriculture   |
| 3km From St. Marys   | Special Policy Area       | Community Park           | Regional Corridor   |
| Tourism Node         | Special Study Area        | Environmental Protection | Rural               |
| GO Station           | Special Study GO Area     | Gateway Commercial       | Transportation Hub  |
| Neighbourhood Centre | Aggregate Extraction Area | General Industrial       | Urban Centre        |
| Community Park       | Greenbelt Boundary        | Light Industrial         | Urban Residential   |
| Municipal Wide Park  | Aggregate Extraction      | Green Space              | Utility             |
|                      |                           | Prestige Employment      | Waterfront Greenway |