



JAMES DICK CONSTRUCTION LIMITED

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HALTON REGION

DEC 14 2018

December 11, 2018

PLANNING SERVICES

Legislative and Planning Services
Planning Services
Halton Region
1151 Bronte Road
Oakville ON
L6M 3M1

RE: James Dick Reid Road Reservoir Quarry Aggregate Resources Act Application

Attention: Mr. Joe Nethery, Manager of Community Planning

We are writing in response to your comments dated September 17, 2018 in regard to our proposed quarry. We are working through the objections that we have received under the Aggregate Resources Act (ARA) process. We would be happy to sit down with you to explain the proposal and review your concerns.

Potential effects on the environment

The site has been intensely studied from both a water resources and natural heritage perspective. *Table 1: Site Investigation Record – Reid Road Reservoir* found in the GWS Ecological and Forestry Services (GWS) Report outlines the over 40 days of field work conducted on this site by qualified biologists. This detailed site work resulted in the definition of natural features and onsite communities as depicted in detail in Figure 11 of the GWS report. Key features on surrounding lands are defined in Figures 5,7 and 8 of the same report. The biological team worked closely with the hydrogeologists to develop a suitable mitigation plan that takes into account the characterization and conditions at the site and surrounding areas.

Study methodologies were developed to address the Aggregate Resources Act Provincial Standards and our project team has experience in meeting those requirements. The application has been deemed complete by the Ministry of Natural Resources and Forestry (MNRF).

Peer reviews are not required under the ARA process but we understand that third parties may conduct their own reviews, if they wish. For clarity, JDCL will not be funding any third-party peer reviews. We are working with qualified staff from various Provincial ministries to ensure that the study methodologies were appropriate and suitable mitigation strategies are in place.

The Summary Report prepared by MacNaughton Hermson Britton Clarkson (MHBC) integrates the conclusions of the various reports and implements them through the notes on the Site Plan. The Site Plan is the governing document in the regulation of the site. Operating in compliance with this Site Plan will ensure that there are no significant negative impacts from the operation.

The site has been designed by drawing on and integrating the expertise of the project team across the various disciplines.

Significant Woodlands are addressed in Sections 8 and 14 of the GWS Report. The GWS report states, "No trees will be removed within Significant Woodlands. Consequently, there will be no direct effects on significant woodlands." and, after considering the significant woodlands in the context of other natural features, "It is concluded that the proposed quarry will have no effect on significant woodlands or their ecological functions."

Significant wildlife habitats are also comprehensively considered in the GWS report. GWS concludes, "There will be no adverse effects on significant wildlife habitat which includes amphibian breeding areas, turtle hibernaculum, nesting habitat for the Wood Thrush, Eastern Wood-Pewee, Nashville Warbler and the suite of area sensitive breeding birds, as well as the habitat of brook trout, eastern ribbonsnake, porcupine and snowshoe hare. Furthermore, the habitat of regionally and/or locally rare plants will also be protected and maintained since the significant woodlands and wetlands will not sustain any adverse effects." All of this work is being reviewed by the MNRF who hold approval authority and a mandate for protection of these habitats.

Haul Route

This application is somewhat unusual in that up until recently the proposed quarry site was an operating gravel pit. As such the access road is already constructed and paved. The haul route, one of the shortest aggregate haul routes to a 400 series highway in Ontario, was built to accommodate the relatively low levels of truck traffic expected from this modestly sized operation.

Reid Side Road, the Haul Route, is an existing truck haul route. The Reid Side Road haul road was constructed jointly by Springbank Sand & Gravel, the Town of Milton and the MTO specifically to address hauling material from this property to the 401 ramps. Springbank paid for the cost of constructing this haul road, then known as the Springbank Haul Road, today known as Reid Side Road. Paradigm Engineering has assessed the existing traffic along with the projected traffic.

Please find attached the Haul Road Agreement dated December 12, 1977 pertaining to this road, executed by the Region, the Township, Springbank and approved by the Ministry of Transportation. You will note that the provisions of this agreement will enure to the benefit of and be binding upon the respective parties including their successors and assigns. We do not object to the provisions of this agreement being a condition of license.

Blast Impact Analysis

The Blast Impact Analysis report has been completed to the standards required by the Aggregates Resources Act (ARA). Explotech Engineering Ltd. (Explotech) has completed similar reports for many other license applications under the ARA and is one of the more experienced firms in Ontario. All blasting activity must meet provincial criteria for noise and vibration at the closest receptors. These criteria are applicable for all blasting methods. If the standards that are in place to protect the environment and the surrounding community cannot be met, then the site cannot operate. Underwater blasting is a normal, well understood method that James Dick

Construction Ltd. (JDCL) has utilized with excellent results. Approximately 30 blasts per year will be undertaken, each of which lasts about one second. Thus, the cumulative annual blasting impact is less than one minute.

There are many operational measures that can be taken to reduce blasting noise and vibration. These include, managing the weight of charge per delay, decking, reducing hole diameters close to the property line, and reduction in quarry depth close to receptors. The key point is that the quarry must operate within provincial standards at all times. Operating the quarry beyond provincial standards would not be allowed by the MNRF or the Ministry of the Environment Conservation and Parks (MECP).

Figure 3 of the Aercoustics Engineering Ltd. (Aercoustics) report outlines the receptor locations including vacant lots in proximity to the property that might have receptors in the future. If there are other receptors that Halton wishes to have assessed please bring those to our attention.

Potential effects on nearby communities

Water supplies are protected. The proposed quarry must operate in accordance with MECP permits under the provisions of the Ontario Water Resources Act. There is a detailed monitoring plan prescribed in Section 9 of the Harden Environmental Services Ltd. (Harden) Report that is part of the proposal.

Given the simplicity of the proposal there is no need for an adaptive management plan. Aggregate extraction will resume in the three existing ponds and an additional small pond will be created in the southwest area of the site. The allowable water level change to on-site wetlands is measured in centimeters and will be regulated by a combination of extraction rates and availability of water from the existing ponds. As such there is limited risk that water levels cannot be controlled as envisaged. As rehabilitation is instantaneous with below water extraction there is no need to manage the site post extraction for long periods of time. There is no long-term pumping, no risk of unanticipated water level changes, and no post rehabilitation management period, therefore we are not proposing any special financial arrangements or agreements beyond our obligations under the ARA.

The Site Plans outline the extraction sequence of the proposed quarry. There is no overall timeline attached to the operation as the timing of extraction is dependent on market conditions.

Rehabilitation Suitability

The pond-based rehabilitation proposed is in many ways very similar to what exists at the site today. The biologists have recommended some environmental enhancement features that should improve the site.

It appears that the modelling of the closure plan is misunderstood. The closure plan models all ponds post extraction and indicates that pond levels quickly stabilize at levels where post rehabilitation management is not required. One of our objectives was to design the site without the need for energy intensive perpetual pumping regimes that the Region has approved elsewhere. This site is designed as a "walkaway". The water table leveling effect of initial pond

construction has already occurred on this site where the gravel pit ponds exist. The pumping into wetlands relates to very small amounts of water meant to overcome any impacts from the physical removal of rock from the ponds during operations. Post extraction there are no operational activities and hence no impacts.

The effects of quarrying have been avoided or mitigated as proposed and outlined in the documents provided. If the Region does have specific recommendations for monitoring or mitigation strategies, we would be pleased to consider them. Monitoring results during operations could also be circulated to the Region upon request.

Ground and Surface Water Resources

The application proposes to tie the extraction rate to the environmental trigger levels established in the monitoring program. Said simply, this is a quarry that will work in harmony with the ability of the environment to sustain it. In a wet year more rock may be extracted from below water, in a dry year less. The overall tonnage figure (990,000 tonnes) relates to the overall shipping level from the site (as opposed to extraction levels). Shipping levels are a composite of annual above and below water extraction, extracted material from previous years, stockpiled material and recycled material.

Appendix F of the Harden Report is the Earth FX Integrated Hydrologic/Hydrogeologic Model of the Reid Road Reservoir Property. Sections 8 and 9 of this report show graphs indicating the baseline conditions in various ponds and wetlands and the predicted levels. Maps are also provided showing anticipated areas of groundwater drawdown. Earthfx used an integrated surface water/groundwater model to help assess potential impacts during extraction and post-closure conditions. The model results, observed conditions and experience elsewhere lead us to conclude that water level changes will be small and pumping water from existing ponds will mitigate water level changes in the wetlands. A detailed groundwater and surface water monitoring program has been recommended and has been adopted onto the site plans.

The detailed reports provide comprehensive factual background and detail as to how this quarry can be implemented with minimal impact to the environment. Kindly provide specifics if you still have concerns after reviewing our reports.

We have monitored the quality of quarry water at other locations using subaqueous and above water blasting techniques. Our Guelph Quarry pond passes Ontario Drinking Water criteria for all chemical parameters. We have not detected elevated concentrations of "blasting related ingredients and chemicals" such that Ontario Drinking Water Quality Objectives are out of compliance. All explosives are waterproof, do not dissolve in water and are converted into gas during the blast where they vent to the atmosphere. Testing before and immediately after blasting events does not detect elevated concentrations of blasting agents in pond water.

The Amabel Dolostone is in immediate contact with the existing pond water with bedrock exposures throughout the existing ponds. Pond water can already move freely into the bedrock aquifer and vis-a versa. Removing the rock will simply increase the storage capacity of the reservoir. Local wells have not had issues to date given the connection that already exists. Our experience at other sites, the independent professional engineers (hydrogeologists) we hired to evaluate potential impacts and the professional geoscientists and engineers at the MECP have

concluded that local water wells will not be impacted. If you have evidence to the contrary, we would be interested in an opportunity to review and comment. We are happy to discuss any enhancements of the water monitoring program that are reasonable.

Planning and land use matters

Under the ARA the planning requirement is that the site is zoned for extraction. The necessary zoning is already in place for this site. JDCL is following the legislated process under the ARA. JDCL is not seeking to avoid a Planning Application – there is no such application to be made. Nor does JDCL intend to avoid scrutiny of the application against current environmental standards and industry best practices.

Other concerns

Blasting underwater is a normal part of blasting operations. It is used in many parts of the world including Ontario. JDCL has used it extensively in Ontario sites and believes it will be used more and more in the province to avoid groundwater impacts and save energy by eliminating the need for dewatering. This technique is a positive step in the evolution of our industry.

Extra hard copies of the reports are available for viewing at the Town, the Region and the MNRF Aurora District Office. Copies are also available for viewing online at <http://www.jamesdick.com/reid-road-reservoir-quarry/>. The public has meaningfully participated in the process.

In regard to the JART process, we understand that this was originally organized to coordinate a Planning Act approval processes alongside other overlapping application processes. In this case only an Aggregate Resources Act application has been made

Summary

As we have mentioned above, the ARA process is continuing. We do think it is worth reiterating that the usual ARA reviews that are taking place and pointing out that there will be many checks and balances in place should the quarry be approved. These considerations are directly relevant to many of the concerns that you have raised in your comment letter. For example:

- o MNRF is completing a comprehensive review of potential impacts on all natural heritage features including endangered species. This includes the interactions between hydrogeology and natural heritage. If a licence is issued there will be site plan conditions that require ongoing monitoring of water levels in surrounding natural heritage features to ensure that the appropriate standards are being met.
- o In addition to the MNRF hydrogeological review, the MOECP will review the hydrogeological report. Additionally, the quarry cannot operate without a Permit to Take Water under the Ontario Water Resources Act. The legislation and permitting will ensure the protection of surrounding water supplies. The site will be well monitored and cannot operate if adjacent water supplies are affected.
- o With respect to blasting, it will be a condition of the ARA licence that the site operate in accordance with MOE guidelines for blasting noise and vibration. These guidelines are

protective of area wells and structures. All blasts will be monitored and the site cannot operate if the protective standards are not met.

o With respect to air quality and noise, the Environmental Protection Act and associated permitting (environmental compliance approvals) are all in place to ensure that there are no adverse affects on other sensitive uses in the area. In order to operate, the site must demonstrate compliance with all applicable noise and air quality standards.

If the Town, Region and Conservation Halton are coordinating preparation of their comments under the ARA we would be pleased to meet or provide additional information where we can assist. We do need to receive any further comments in the near future if Halton Region wishes to have its comments considered in the ongoing ARA process.

Sincerely,

JAMES DICK CONSTRUCTION LIMITED

Greg Sweetnam, Exec V.P.