

TOWN OF CALEDON

PEER REVIEW

OF

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**ASSESSMENT OF SOCIAL IMPACTS
PROPOSED ROCKFORT QUARRY**

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SOCIAL IMPACT PEER REVIEW REPORT PROPOSED ROCKFORT QUARRY

1.0 INTRODUCTION

1.1 James Dick Aggregates Limited Rockfort Application

This peer review report refers to the proposed development of the James Dick Construction Limited (JDCL) Rockfort Quarry. The proposed license area for the Rockfort Quarry is approximately 89 hectares.

1.2 Purpose of Peer Review

This peer review examines the:

- Requirement for the assessment of social impacts,
- Whether JDCL has met the requirements for the assessment of social impacts as per OPA 161,
- Social impacts that should be studied by JDCL to meet OPA 161 requirements.

1.3 Assessment of Social Impacts

a. Required Approach to the Assessment of Social Impacts

Assessments of social impacts examine the characteristics of the undertaking ('proposed quarry and haul route') and the potential for direct or indirect effects on the community, in terms of how people live, work and recreate. The word '*people*' is significant.

Social impact assessments also provide information that assists the evaluation of broader community-wide effects. These assessments also consider the larger social effects of aggregate development: such as, the social costs and benefits of aggregate supplies in meeting society's need for roads, places of employment, building homes and institutions.

Social impact assessment methodologies consider avoidance, minimization, mitigation, monitoring and compensation measures that can be implemented by the proponent and/or the community to maximize desirable and minimize undesirable social effects. After these measures are considered, assessments of social impacts draw conclusions about whether the proposed undertaking represents sound planning in the public interest. An assessment of social impacts based on accepted methodologies has not been completed for the proposed Rockfort Quarry.

b. Standard Methodology

Town of Caledon Official Plan, Section 5.11.2.4.2. requires an assessment of social impacts of proposed aggregate developments. The word '*assessment*' refers to a methodology to be used to assess social

impacts. The assessment of social impacts examines the effects¹ of an undertaking, such as quarry construction and operations, on the social environment and determines whether the undertaking will have positive or negative effects on the quality of life of local residents and communities. Assessments of social impacts follow a standard methodology² involving: 1) *scoping* the social environment to be studied, 2) *profiling* existing social conditions, 3) *projecting* changes that are likely to occur due to the undertaking, 4) *assessing* the effects for relative importance, 5) *evaluating* overall social impacts and 6) drawing conclusions and *recommending* how to proceed with the proposed undertaking.

1) **Scoping** determines the parameters of the assessment. For the proposed Rockfort Quarry several parts of OPA 161 provide direction about the scope of the assessment. Section 2.2.3. (16th bullet) states that understanding local community/ social values is important to the assessment as is the balancing of other goals of OPA 161 compared to social and community factors (18th bullet). In addition to the people in the vicinity of the proposed Rockfort Quarry, Section 5.11.2.4.4. (c) states that the social impacts of alternative routes and the least impact haul route should be assessed.

2) **Profiling** refers to the need to develop a profile of existing social conditions of people in the area likely to be affected and establishing baseline information which can be used to determine what difference the proposed undertaking will make to the well being of those affected. At a minimum, this involves primary data collection about the characteristics of local residents (quarry and haul route) and other people in the community relevant to the proposed application, making observations and drawing conclusions about how they live, work and recreate. Data collection techniques include scientific surveys of residents, interviews and structured observations.

3) **Projecting** refers to the need to identify the kinds of social changes that are likely to occur should the proposed undertaking proceed, who will be affected, in what way and for how long.

4) **Assessing** refers to the assessment of the predicted social change to determine their relative importance. The assessor takes into account such criteria as magnitude and duration of potential impacts, current conditions, future conditions, community goals and impact mitigation measures.

5) **Evaluating** refers to the overall social impact of the proposed undertaking resulting from the application of evaluation criteria. Impact minimization, avoidance and mitigation measures are applied in order to understand the net effects. The proponent is expected to evaluate whether the proposal would have any unacceptable impacts.

6) **Recommending** involves drawing conclusions about whether and/ or how to proceed with the proposed undertaking, taking into account the potential effectiveness and public acceptability of possible impact management measures.

Many quarry applications have completed an assessment of social impacts using this standard methodology. Such studies have provided useful information supporting the evaluation of aggregate applications, including limestone quarries (e.g. Walker Brothers, Niagara (O.M.B File O910030); Graham Brothers, Caledon Graham Brothers, O.M.B. File PL000300); Lafarge, Camden East, (LaFarge, 1997 O.M.B. File PL 912122); Five W Farms, Bexley Township (O.M.B. File PL 970862)).

¹ Impacts are effects that have been evaluated as being significant (either positive or negative). They may be caused by desirable or undesirable external effects to people from projects, plans, programs and policies. The extent to which social effects are significant can be influenced through avoidance, mitigation, or monitoring and compensation measures.

² As noted in the Steetley – South Quarry Landfill Site Decision and Reasons for Decision, The Joint Board, Consolidated Hearings Act, CH-91-08, March 1995

2.0 AN ASSESSMENT OF SOCIAL IMPACTS IS REQUIRED

2.1 Town of Caledon, OPA 161

a. *Relevant Policy*

The Town of Caledon's policies in OPA 161 are approved. While OPA 161 does not require a stand-alone report, the deliberate assessment of social impacts is required. The assessment needs to be scientifically sound, complete and comprehensive. Social impact assessments have been completed in support of previous aggregate applications in Caledon so as to meet the requirements of OPA 161. I conclude that a specific social impact assessment has not been and should be, completed for the Rockfort Quarry application.

OPA 161 requires an assessment of social impacts to comply with the following sections:

- 2.2.3. OP Goals and Objectives – balance local community/ social values; taking into account social and community factors.
- 5.11.1.1. Objective of Town-wide balancing of aggregate extraction against Caledon's community character and social values over the short and long term.
- 5.11.2.1.2. Inform the planning justification for Aggregate Reserve Lands being considered for Extractive Industrial A or B Area 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.
- 5.11.2.4.2 (c) Criteria for approving Aggregate Resource Lands will include an assessment of social impacts and demonstration that the proposal will not have any unacceptable impacts.
- 5.11.2.4.2. (k) Through land-use analysis, demonstration that the proposal will not result in any unacceptable land use conflicts.
- 5.11.2.4.4. A description of impacts and an evaluation of acceptable limits is required including an assessment of social impact of alternative haul routes and the proposed haul route to the satisfaction of 5.11.2.4.2.
- 5.11.2.4.13 Basis of assessment of social impacts.
- 5.11.2.6.3. Consider the adjoining municipality.
- 5.11.2.7.6. Minimize social impacts and other environmental impacts.

b. *Core Requirement to Assess Effects of Proposed Quarry on People*

Section 5.11.2.1.2. Section 5.11.2.4.2.(c) and Section 5.11.2.4.4. requires the applicant to assess community and social impacts as through an analysis defined by Section 5.11.2.4.13. The information is also relevant to the determination of unacceptable land use conflicts pertaining to Section 5.11.2.4.2. (k). The intent of Section 5.11.2.4.13 is to require the specific examination of the direct effect of the proposed quarry on *people*.

To examine the direct effects on people, the applicant must go beyond examining sensitive land uses (land use characteristics, amenity areas and outdoor spaces), as required in Section 5.11.2.6.2. Land uses may be sensitive because there are indirect effects on people or flora and fauna associated with these lands. But, the focus of Section 5.11.2.4.13 is the specific and direct effect of the proposed quarry on people, not the land use.

Section 5.11.2.4.13 further directs that the social impact analysis look beyond implications for buildings. The location and characteristics of buildings has been noted by several of the proponent's planners and engineers as sensitive receptors or points of impingement. These physical features are important to these disciplines because people may be associated with the buildings. However, Section 5.11.2.4.13 specifically requires that the analysis consider the social impact implications for people who live in the buildings, such as the number of people living there, whether they are carrying on home based occupations or business that may be noise, dust and vibration sensitive and other information.

c. *Predictable, Measurable, Significant, Objective*

OPA 161 Section 5.11.2.4.13 requires the assessment of social impacts to be based on an assessment that is *predictable* and *measurable*, pertaining to effects that are *significant* and resulting in an evaluation that is *objective*. To meet the intent of these terms, the proponent must produce social data that can be relied upon, based upon sound and objective social science methods. In contrast, resident perceptions of how they might be affected, or comments derived through a public consultation process, or comments at citizen night, while important, do not provide the rigour and reliability of a scientific analysis. Nor do summary overviews of the possible implications to local physical features derived from data in the technical reports. Instead, the assessment of the significance of social effects requires the use of social science methodologies to meet an acceptable standard of predictability, measurability and objectivity. Social science tools such as surveys, interviews, case studies, statistical analysis and behavioural science observation techniques generate data that meets the standard of predictability, measurability and objectivity for understanding the effects on local people.

d. *Provincial Standards Important to the Evaluation*

OPA 161 also states, “*Such studies will be based on Provincial standards, regulations and guidelines....*” Provincial standards, regulations and guidelines address some of the potential sources of social effects of an aggregate pit and haul route, such as dust and noise. Where standards, guidelines and regulations can be used, they are important in OPA 161 to support scoping the assessment of social effects (who is likely to be affected by dust and noise) as well as to support the evaluation of significant social impacts (will the effects on people be significant).

Some project specific effects, such as increased traffic, visual changes, loss of cultural heritage features, water well effects, vibration that have social effects are not subject to Provincial standards, regulations and guidelines. Where the assessment of social impacts cannot be based on Provincial standards, guidelines and regulations, OPA 161 requires professional judgement based on predictable, measurable and objective social data about local people and the potential effect.

There are no provincial standards, regulations and guidelines that deal with community-wide effects. In this circumstance, the applicant is required to assess social impacts using social science methods and draw conclusions about net effects.

2.2 Regional Municipality of Peel’s Official Plan

The Region of Peel Official Plan, under Section 3.3, recognizes the importance of mineral aggregate extraction for the economic development and employment opportunities. At the same time, the Region acknowledges as a relevant consideration, “*that there are lands within the HPMARA [High Potential Mineral Aggregate Resource Area], as shown on Schedule B, which may not be appropriate for protection or extraction because of local environmental, cultural, social and other planning considerations*” [emphasis added] (p. 37). The subject application is in an area of HPMARA on Schedule C.

Section 3.3.2. of the Region’s Official Plan establishes policies pertaining to the examination of social and community effects of aggregate extraction in Sections 3.3.2.7, 3.3.2.8, and 3.3.2.11(d). In particular, Section 3.3.2.7 establishes a policy for Peel Region to “*require that all extraction and processing and associated activities be located, designed and operated so as to minimize environmental, community and social impacts*,” [emphasis added] (p. 40). Based on Region of Peel Official Plan requirements, we expect the proponent to assess both community-wide and local social impacts.

2.3 The Township of Erin’s Official Plan

The former Township and current Town of Erin abuts the western boundary of the subject application. Some people living in the Town of Erin will be in the area of influence of the Rockfort Quarry. Section 5.11.2.6.3. of OPA 161 is therefore relevant regarding the effects on adjoining municipalities.

The Town of Erin Official Plan requires information on social impacts on local residents. Policies pertaining to the need for the assessment of social impacts are found in Section 4.4 of the Town of Erin, Official Plan, Extractive Industrial. With respect to balancing mineral aggregate extraction with social and natural features the Town’s objectives include: “*ensure that mineral aggregate resources remain available to meet the needs of consumers and can be mined in a manner which minimizes the disturbance to the community and natural environment*,” (Section 4.4.1). Among the specific matters to be considered by Council prior to an amendment to the Official Plan to permit new areas for extractive purposes are: “*the impact on adjacent land uses and residents*” (Section 4.4.3. (c)). An assessment of the social impact on Town of Erin residents would be appropriate to address effects on residents and has not been completed.

3.0 JDCL HAS NOT MET THE REQUIREMENTS OF OPA 161

3.1 Inadequate Assessment of Social Effects

This report reflects a review of the technical reports listed in Section 6 – Reports Reviewed. Data gathered through JDCL technical reports and the lack of scientific analysis does not meet OPA 161 requirements for social impact assessment.

The Proponent talked to local residents during the public consultation process, administered a questionnaire to some area residents through an open house and mail, collected information on wells, creeks, ponds and springs³. The later survey did not ask residents questions about the impact of potential

³ “Private Water Well Inventory – Questionnaire”; “Surface Water Inventory – Questionnaire”, Conestoga-Rovers & Associates, March 1997.

loss of well water or whether the proposed contingency plan would itself have unacceptable impacts. The social data reported as being collected by separate questionnaire⁴ in the JDCL Planning and Justification Report, in part, states:

- 35 percent of residents depend on their wells for agricultural and livestock uses
- there is a higher percentage of seniors around the site than the average for Caledon and Ontario
- there is use of the local roads for walking, biking, horse-back riding by all residents
- 60 percent of the homes are used for business purposes
- 80 percent of residents report some form of health problem including 40 percent suffering from allergies or asthma.

The survey data collected and presented in the JDCL Planning and Justification report is incomplete and begins to inform only the first ‘profiling’ step of a social impact analysis discussed in Section 1.3 (b) of this Witness Statement. A list of data does not constitute an analysis. The survey research methodology, in terms of survey design and the scientific technique for survey administration, is not available.

We are unaware of whether the 24 residents returning questionnaires represents a high percentage return of the potential sample population or low percentage return. ‘Mail return’ questionnaires tend to have less reliability than door to door surveys or telephone surveys. Thus, there is no data provided on whether the sample size is scientific and conclusions are valid.

A statistical analysis regarding the reliability of the data is absent. There is no analysis of the findings against social impact assessment criteria, nor is there a listing of the criteria used to evaluate social impacts. The data is not sufficient to meet the requirement of the survey results yielding a predictable, measurable, significant and objective assessment of effects on people.

Other technical reports prepared by JDCL addressing social features are incomplete and unreliable. These reports list locations of houses, provide a physical description of the site vicinity and one report provides a non-scientific commentary on the characteristics of local communities. What is missing is a scientifically derived inventory of significant aspects of the local communities. Also missing is a listing of effects significant to local people based on data and an evaluation of whether the proposed quarry will have unacceptable impacts based on a rigorous, scientific evaluation methodology.

Because the social profile data is incomplete and unreliable, we are unaware how many people live close to the quarry, the full extent to which people have home-based businesses and the full extent to which people engage in activities that would be sensitive to quarry operations. Existing information noted above and presented by JDCL on page 54 of the JDCL Planning and Justification Report on health status of surrounding residents would lead to the conclusion that further inquiry is warranted.

There is incomplete data on quality of life characteristics of people, and how they live, work and recreate in the vicinity of the proposed quarry and haul route. Also missing is a description of what features are important to the quality of life of people in the vicinity of the proposed quarry and along the haul route. For example, are sides of the haul route used frequently enough by local residents that additional mitigation measures are needed to further separate horse and bike riders from gravel trucks? Are home-based businesses sensitive to loss of water and vibration such that adaptive management measures will be unsuccessful?

⁴ A copy of the questionnaire and results has not been provided to Hardy Stevenson and Associates Limited.

Thus, there is no predictable, measurable and objective evaluation of acceptability of social impacts of the proposed quarry and haul route upon which to draw reliable conclusions.

3.2 Individual or Combined Studies Do not meet the Standard Set By OPA161

Noise, dust, vibration and traffic studies have been completed by JDCL. However, in considering Provincial standards, regulations or guidelines there is no evidence that the applicant has completed an assessment of social impact in compliance with the requirements of Section 5.11.2.4.13. of Official Plan Amendment 161. For each technical study, people are not surveyed and interviewed. Indeed, a specific group of residents living in the Cedarvale Park appear to have been dismissed as not relevant to the analysis. Specific impacts on people are not considered in the assessments in a manner that yields data on predictable, measurable, objective effects on people caused by factors such as noise, dust, traffic levels and vibration.

Furthermore, the cumulative total of conclusions derived from all of the technical studies of noise, dust, vibration, transportation, and other studies completed by the proponent do not add up to a social impact assessment.

4.0 WHAT DATA WOULD BE GATHERED AS THE BASIS OF AN ANALYSIS OF THE POTENTIAL SOCIAL IMPACTS OF THE PROPOSED ROCKFORT QUARRY?

In my opinion, the following represents measurable, predictable, significant and objective data that should be gathered to support a complete and objective assessment of social impacts on people in the vicinity of the proposed Rockfort Quarry, consistent with the requirements of OPA 161. JDCL should have completed interviews with people and collected reliable quantitative data as follows:

4.1 Assessment Of Social Impacts Pertaining To People Living, Working And Recreating Along The Haul Route And Alternatives

- Characteristics of the people, such as,
 - How many people live along the proposed and alternative haul routes?
 - How many elderly or teen drivers live on the haul route?
 - Numbers of people engaged in recreational activities along the haul route (e.g. Cedarvale Park)
 - Numbers of people living along the haul route whose health may be affected by noise, dust or vibration due to truck traffic.
 - How many cyclists, horse riders and pedestrians use the road?
- How these people use their front yards and driveways, such as,
 - Numbers of people who have outdoor leisure space close to the roadway. And, quantification of uses of that space.
 - Numbers of people who have to back their cars out of the driveway along the haul route.
- The types of activities these people value that could potentially be affected by quarrying and associated activities, such as,

- Reliable data on numbers of people who have home businesses dependent on a rural noise environment. And, types of business.
- Are there any home day care centres or home schools on the route?
- Numbers of residents who engage in types of farming or hobbies that could be affected by noise, dust and vibration from trucks?
- The level of impact that noise, dust, vibration and traffic have on their current quality of life, such as,
 - Numbers of people who engage in any activities (night shift workers) that may be impacted by truck noise, dust and vibration?
 - Number of amenities such as pools, ponds, soft fruit orchards, and patio areas that will be affected by dust from trucks?
 - Number of animals such as horses that will be affected by noise and vibration?
- Type of amenities and social features affected by road widening along alternative routes, such as,
 - For haul route alternatives, how many hedgerows, fences or retaining walls would have to be moved or reconstructed as an indirect result of widening the road to accommodate truck traffic?

4.2 Assessment of Social Effects to People Related Noise and Vibration

- Effects to residents in the vicinity of the quarry due to noise and vibration during construction, such as,
 - Numbers of local people who could be affected by short-term construction activity associated drilling and/ or blasting.
 - Do local residents work on the night shift?
 - Do people have home occupations that may be noise sensitive?
 - Do people engage in potentially impacted seasonal activities that will coincide with peak construction activity?
 - Numbers of people engaging in farm business activities that will be impacted by noise and vibration.
- For people affected by noise and vibration during quarry operations, information such as,
 - What are the potential effects of vibration on horse farming businesses?
 - How many people living within 2 kms of the quarry will be affected by vibration?
 - Do people in the vicinity of the site engage in shift work?
 - Quantification of whether mitigation measures due to damage to buildings and houses will be effective for local people.
 - Beyond the buildings, quantification of how people use their property closest to the proposed quarry.

4.3 Assessment of Social Effects to People Related Hydrogeological Impacts

- Effects to people due to potential loss of water supplies, such as,
 - To what extent do local people rely on wells for household and livestock needs?
 - Numbers of people who are highly dependent on well water?
- Effects of loss of well water affecting property values for local people, such as,
 - Assessment of local residents as to whether the proposed systems of replacing water supplies would be an improvement of current water supply or not?

- Assessment of whether the risks of loss of water will affect the marketability of their property?
- Effect of alternative water supplies on local people, such as,
 - Will alternative water treatment supply for nearby residences meet the needs of livestock?
 - Will trucked water be adequate for feeding livestock in winter months?
 - Quantify whether the policy of deepening or replacing residential wells will have desirable/undesirable social effects for local residents.
 - Are there social effects associated with the consideration of who decides whether the quarry or a dry summer is the cause of loss of water quality and quantity for nearby residential wells?

4.4 Assessment of Social Effects to People Arising from Dust

- Are there dust susceptible health characteristics of people in the vicinity of the proposed quarry particularly for people living at sites 16, 17, 20 and 21 where the highest levels of dust are predicted?
- Data gathering for other residents should include:
 - How many people live in the vicinity of the site and haul route?
 - Reliable documentation of potential effects of people in the vicinity of the site and haul route who are allergic, asthmatic or have lung illnesses.
- What quality of life characteristics of local people are potentially affected by dust, such as?
 - Are there gardens or crops that may be susceptible to dust?
 - Have people invested in home improvements or amenities, such as pools, garden furniture, ponds that may be sensitive to dust?
 - Quantification of the extent to which people engage in outdoor activities (social or recreational) that are susceptible to dust?
 - Quantification of the frequency that people will need to clean their property due to dust?

4.5 Assessment of Social Effects to People Related to Property Value Changes

- How would a change in property values affect the socio-economic circumstances of local people, such as?
 - Will property values change?
 - How many people would be affected by a change in property values?
 - Where do these people live in relation to the proposed quarry?
 - Which people would be covered by Property Value Protection (PVP)?
 - How would people settle a claim for business losses due to quarry activity?
- How effective would property value protection⁵ and maintenance programs⁶ be, such as?
 - What will be the burden on local people for resolving claims about nuisance effects?

⁵ Property Value Protection programs establish a process for the protection of property values including: distance at which property value protection would apply, who is to assume costs for appraisals, the benchmark data from which values would be protected, property value maintenance provisions, options of proponent purchase if properties cannot be sold, etc.

⁶ Property value maintenance programs assist people to maintain the value of their homes. This is particularly important for re-mortgaging homes.

- Will local people be responsible for proving there has been a decline in property values?
- Will local people have to prove there has been an extension of the time required to sell their or neighbouring properties?

5.0 CONCLUSIONS

The technical studies of the proposed Rockfort Quarry do not satisfy the requirements of OPA 161 for assessing social impacts. Specifically:

- 5.11.2.4.2 (c) JDCL has not assessed social impacts and demonstrated that the proposal will not have unacceptable impacts.
- 5.11.2.4.2. (k) JDCL has not demonstrated that the proposal will not result in any unacceptable land use conflicts.
- 5.11.2.4.4. JDCL has not described social impacts, evaluated acceptable limits or assessed the social impact of alternative haul routes and proposed haul route to the standard expected from 5.11.2.4.13.
- 5.11.2.4.13 Studies completed by JDCL individually or cumulatively do not identify and assess the significance of effects to people. There is a lack of assessment and evaluation about social impacts based on information that is predictable, measurable and objective. There are no scientifically defensible or objective conclusions drawn about social impacts based on reliable data.
- 5.11.2.6.3. No information is provided on specific effects on people in adjoining municipality.

A social impact assessment has not been completed. It needs to be completed before the requirements of OPA 161 can be met.

6.0 REPORTS REVIEWED

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JDCL, Rockfort Quarry Project, July 31, 1998 re: community ties