PORT COLBORNE

Meeting
Environmental Advisory Committee
August 11, 2021 6:00 p.m.

The following were in attendance:

Staff:	Darlene Suddard
	Cassandra Banting
Council:	Councillor Mark Bagu
	Councillor Harry Wells
Public Members:	George McKibbon
	Jack Hellinga
	Ryan Waines
	Steven Rivers
	Clayton Nadeau
	Norbert Gieger
	Trent Doan
	Tim Hoyle

As a COVID-19 precaution, city staff and the chair met in person at the Engineering and Operations Centre. The rest of the committee joined on Microsoft Teams.

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1. Call to Order

George called the meeting to order at 6:02 p.m.

2. Adoption of the Agenda

Moved by Jack Hellinga
Seconded by Tim Hoyle

That the agenda dated August 11, 2021 be accepted as circulated.
CARRIED.

3. Disclosures of Interest

Nil.

4. Approval / Review of Previous Meeting Minutes

George noted that the attachment referenced in item 5 is missing from the previous meeting minutes. With that amendment the minutes were adopted.

5. Municipal Re-Organization

Darlene provided an overview of the new organizational structure in the Public Works Department. Darlene is now the Manager of Water Wastewater and Cassandra is the new Environmental Compliance Supervisor. George thanked Darlene for the efforts she has made on behalf of the committee and wished her well in her new position. George welcomed Cassandra to the committee.

6. Presentation – Land Use Compatibility – Ryan Waines

Ryan provided a presentation on Jungbunzlauer's manufacturing operations and the measures Jungbunzlauer takes to achieve land use compatibility of the site. He discussed what JBL's current compliance requirements involve and the future expansion plans.
Source Water Protection considerations were also discussed around JBLs current permit to take water and its water intake from the Welland Canal. Committee members discussed how official plan and zoning provisions can be used to protect water quality in the vicinity of that intake.

Harry Wells, Steve Rivers and George MCKibbon will discuss specific recommendations to Council on how the City's official plan and bylaw can support Jungbunzlauer efforts to achieve land use compatibility while protecting sensitive residential and trail uses and enabling industrial/economic expansion. The subcommittee will also consider measures the City can take in its planning documents to protect water quality in the vicinity of the water intake. These recommendations will be presented at the next EAC meeting.

Ryan's presentation is attached to these minutes.

7. Presentation – MECP Land Use Compatibility Guidelines – George McKibbon

George provided a presentation with an overview of the draft Land Use Compatibility Guidelines released by the Ministry of Environment, Conservation and Parks (MECP) and how these changes may impact municipal land use planning.

The draft guideline represents a substantial and much anticipated update of provincial land use compatibility guidelines. The guideline is needed to help support MECP's air, noise, and odour approvals under the Environmental Protection Act. Implementation of the Guideline as written will require substantial modification of the City's zoning bylaw. Harry, Steve, and

George will use this as background in drafting recommendations for Item 6 above to EAC at the next meeting.

8. Items Arising from Previous Minutes

a) Additional Vale CBRA Recommendations Memo to City Clerk, City Council Received for Information on January 25, 2021.

Jack, Harry, and George will consider how to put recommendations to Council more effectively when addressing item 6 above.

b) Update on Community Gardens

George reported that the city staff committee responsible for implementation of the Recreational Master Plan will reconsider the action requests made to EAC earlier and advise whether further action is needed at their next committee meeting.

9. Electric Vehicles

Norbert will circulate information on electric vehicles and the associated cost savings and environmental footprint. Darlene and Cassandra discussed budget items related to electric charging stations which will be proposed at City-owned facilities. They also discussed the new Fleet Supervisor position which will work with the Climate Change coordinator on reviewing green fleet initiatives.

10. Other Business

George discussed the attached advisory that was circulated to Registered Professional Planners regarding quarry fly rock.

Moved by Jack Hellinga
Seconded by Harry Wells

That the quarry fly rock advisory be sent to the JART Committee responsible for the technical review of the Rankin Quarry Expansion Aggregate and Planning Acts applications.

Jack discussed the recent PTTW renewal request from Port Colborne Quarry.

Clayton indicated he will not be applying to renew his role on the EAC. George and members of the EAC thanked Clayton for his service on the committee as Vice Chair.

Clayton provided an update from Niagara Coastal Community Collaborative and on a citizen science program for the shoreline in partnership with Niagara College. He also discussed a partnership with Swim Drink Fish and partnerships with the NPCA on a grant with the Great Lakes Action Fund.

He indicated that further information could be found on niagaracoastal.ca and the information will be undergoing an update soon.

Members discussed the current Regional Official Plan review. George will consult with regional planning staff and enquire whether a presentation can be made to the committee at the next meeting.

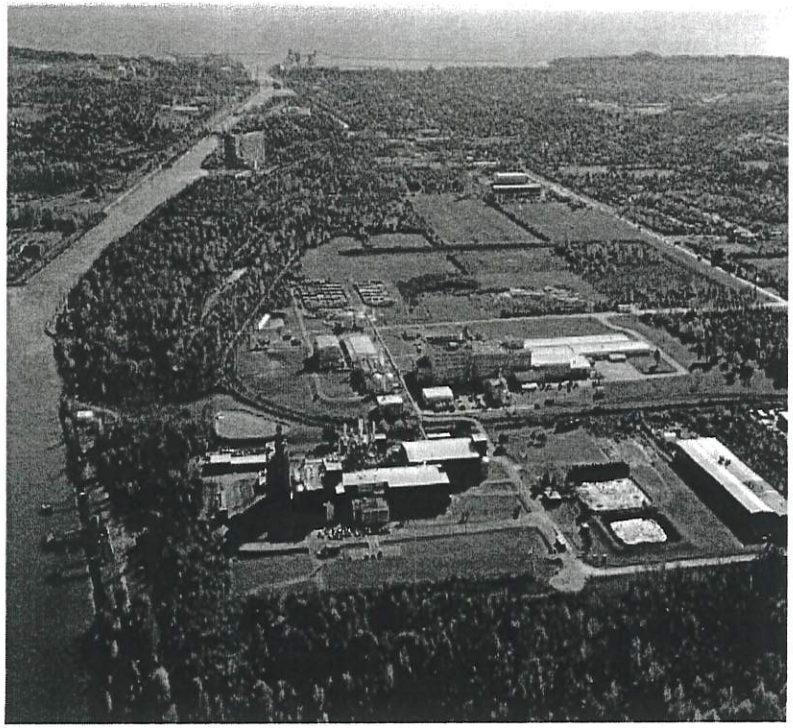
11. Next Meeting /Adjournment

With no further business to discuss, the meeting will be adjourned at 7:42 p.m.

The next EAC meeting will be on Wednesday October 13, at 6 p.m.

Land Use Compatibility Guidelines Discussion

1555 Elm Street, Port Colborne, ON



Environmental Sustainability
Economic Sustainability
Social Sustainability

Jungbunzlauer

From nature to ingredients®

myclimate
shape our future

Item 6.

Land Use Compatibility Discussion

Jungbunzlauer

- Facilities are built on ~25 acres of ~250 acres of JBL owned land in the industrial zoned area of Port Colborne
- The original site was strategically positioned to create a buffer from Elm Street and the closest residential neighbourhood(s)

- **Original Corporate site selection and siting requirements…**

- Greenfield land available adjacent to main raw material supplier of Glucose (formerly Casco / Ingredion)

- Adjacent to the Welland Canal for access to fresh water primarily used for non-contact cooling water purposes (fermentation)

  (*Small portion of the water is also filtered and demineralized and utilized in the manufacture of citric acid and related products*)

- Available leased SLSMC (Seaway lands) for water intake buildings as well as the non-contact & treated wastewater discharge

- Existing rail line runs through the adjacent manufacturing facilities to satisfy bulk shipping needs

- Close proximity to the US border where ~80+% of the finished products are currently exported

- Locally sourced vendors & contractors are utilized for various facility supplies and maintenance needs on an on-going basis

Land Use Compatibility Discussion

Jungbunzlauer

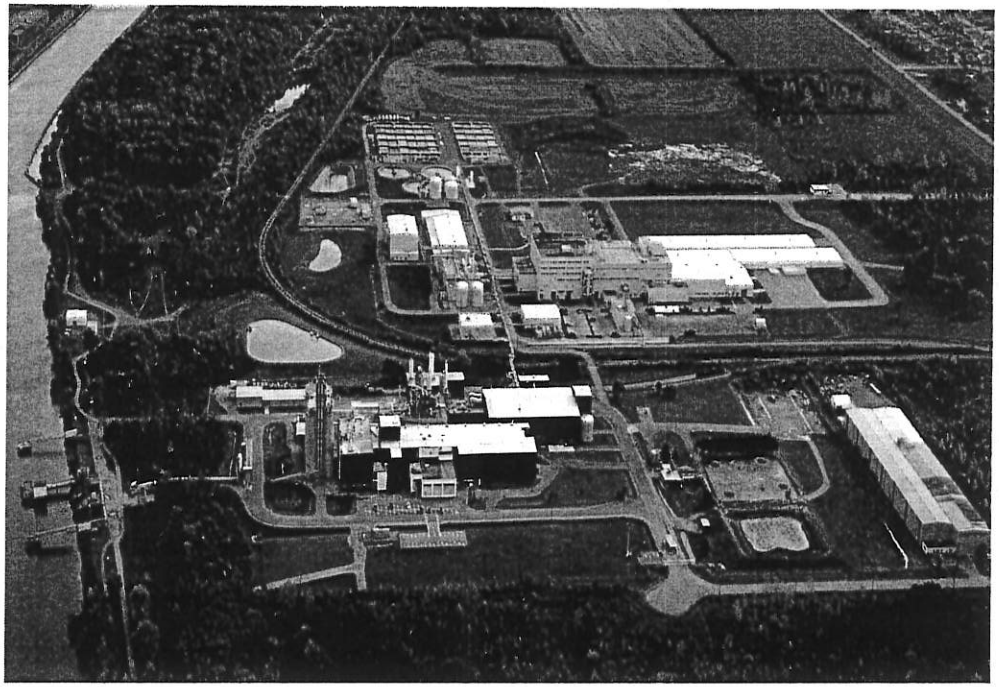
What this means to Jungbunzlauer's manufacturing operations…

- Operating within the facilities Environmental Compliance Approvals (ECA's), Permits & Regulatory Reporting Requirements

- Air & Noise ECA
- Sewage Works ECA
- Stormwater ECA
- Permit to Take Water

- AWSR (Annual Written Summary Reports)
- ESDM (Emission Summary & Dispersion Modelling)
- AAR (Acoustic Assessment Reports)

- Technical Assessments / Future Plans / Modelling
- Utilization of Environmental Consultants
- Regulatory updates to maintain facility compliance

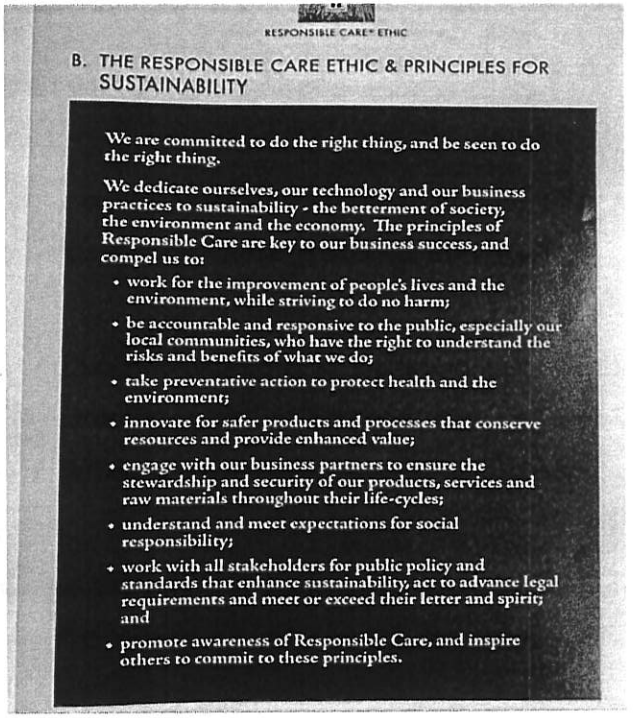


Land Use Compatibility Discussion

Jungbunzlauer

Maintaining & Going Beyond Compliance…

- Verified member of the Chemistry Industry Association of Canada – Responsible Care ® Program / Management System
- Codes of Practice (Operations / Stewardship / Accountability)
- Commitment with a sustainability focus (environmental, economic and social)



- Defined transportation routes to and from the facility
- Scheduled loading / offloading of goods – typically limited to day time hours

- Assessments based on various modelling of facility emissions (Odour / Noise)
- Proactive change out / upgrades of equipment (scrubbers) to help reduce emissions
- Extensive heat recovery processes throughout the facilities to help reduce GHG's

- Installation of silencers on higher sound emitting equipment even if compliant
- Additional soundproofing / esthetics (creation of a berm / planting of trees)

- Reduction of raw material / chemical concentrations to reduce the potential for any offsite impacts to the community at large

Land Use Compatibility Discussion

Jungbunzlauer

Future Expansion Envisioned & Existing Site Planning Evaluations…

- As sales and various customer demands of Citric and similar related products are increasing, additional expansion is being evaluated and envisioned for this facility
- Increase in building infrastructure and footprint for various facility manufacturing processes to increase production volumes
- Additional electrical generation to support the future growth of the facility operations
- Additional wastewater treatment infrastructure to handle and treat the additional loading from the manufacturing processes
- Additional co-products processing equipment and infrastructure to dewater and steam dry these valuable recovered materials
- Evaluating the addition of a Lactic Acid Manufacturing facility
- Evaluating additional stormwater collection infrastructure to ensure adequate handling and sizing of these envisioned and future expansion plans
- Conducting feasibility studies with Consultants for Wind Turbines / Solar / Battery Storage on site / North end of Elm Street to incorporate a more green and renewable energy mix to the facilities electrical demand for manufacturing

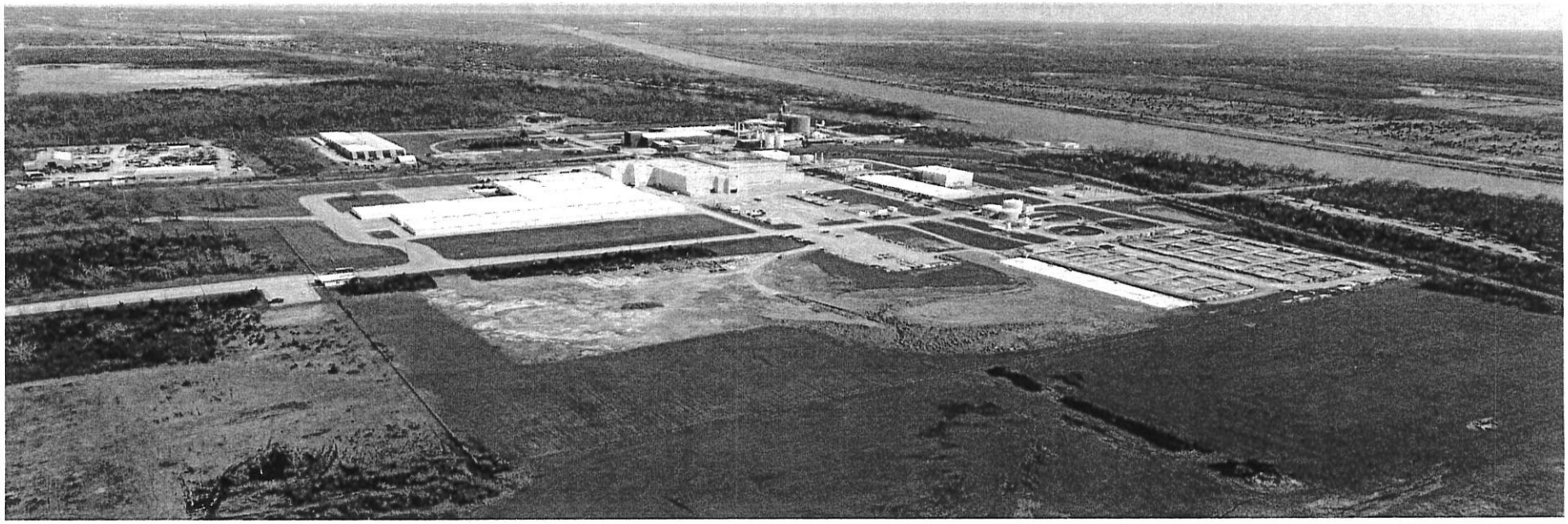
Land Use Compatibility Discussion

Jungbunzlauer

Final notes…

- **Currently working with various consultants related to Air / Noise / Water / Wastewater for further technical analysis on what these envisioned expansion phases would look like, in order to maintain facility compliance including appropriate land compatibility use.**

- **Once complete, plans are to meet with the regulatory body (MECP) for pre-consultation meetings to gain their feedback and seek their approval to hopefully move forward with these various expansion projects here in Port Colborne.**



A Review of MECP's Draft Land Use Compatibility Guidelines

Presentation to Port Colborne's Environmental Advisory Committee

George McKibbon

August 11, 2021

Item 7.

Background

Provincial Policy Statements 2014 and 2020

Report of the Air Quality Task Force Action Plan (Dec. 2013)

Air quality regulation and planning for compatible land uses goes hand in hand

Ontario Regulation 419 addresses the regulation of air emissions

The D 6 Guidelines are used to provide for compatible land uses

The D 6 Guidelines have been around for over 30 years

These were delegated to the Region of Niagara for implementation

The City of Port Colborne needs to be more engaged where zoning applies

MECP is updating them in conjunction with a major review of compliance policies and new odour guidelines

Draft Land Use Compatibility Overview
Table of Contents

Review Highlights

1) Well written and the review is much appreciated and needed.

2) MECP staff assigned to the project are excellent staff and good communicators.

3) The AOIs and MDSs are based primarily on statistical analysis of compliance complaint records over 10 years.

4) While the terminology and approach is similar to the D 6 Guidelines, the draft Land Use Compatibility Guideline is very different in key areas.

5) These differences may have profound impacts on municipal land use planning.

6) It isn't an easy document in its present form to work with.

7) Some components (e.g., tables 1 and 2) of the document are better researched than others.

Comparison Tables 1 and 2

From MECP's June 8 2021 Powerpoint Presentation

AOIs and MSDs for classes of major facilities

Class	Description of Major Facility	AOI	Examples of Major Facility	MSD
Class 1	Operations with known smaller adverse effects.	500 m	Food Manufacturing; Sewage Lagoons; Various EASR activities	200 m
Class 2	Operations with moderate effects. May include some outdoor operations.	750 m	Manufacturing Metal and Glass Parts	300 m
Class 3	Operations with moderate to significant adverse effects that may be difficult to mitigate. May include larger outdoor operations	1,000 m	Aggregate Operations (in relation to sensitive land use proposals only)	500 m
Class 4	Operations with significant adverse effects that may be difficult to mitigate. May include larger outdoor operations.	1,500 m	Meat and meat product processes (slaughterhouses and rendering)	500 m
Class 5	Operations with the most significant adverse effects that may be difficult to mitigate. May include larger outdoor operations	2,000 m	Chemical product manufacturing	500 m

Areas of Influence and Minimum Separation Distances

- Generally, proposed AOIs and MSDs are larger than the current AOIs and MSDs in the D-Series*, as a result of the improved data and statistical analysis, clearer methodology, and technical expertise.
- Some proposed facility-specific AOIs are smaller than its comparative class-related AOIs, providing more flexibility.

Facility Type	Facility AOI	Class AOI
Food Production (General)	500	500
Wastewater Facilities (small)	300	500
Paint Spray / Coating	400	500
Sewage Lagoons	500	500
Waste Transfer Sites	400	500
Recycling Facilities (general)	900	1000

From MECP's June 8 2021 Powerpoint Presentation

Comparison of existing Areas of Influence and Minimum Separation Distances between the D 6 Guidelines and this draft

From MECP's June 8th Powerpoint Presentation

- The following provides a comparison of existing AOIs and MSDs in D-6 vs. proposed AOIs and MSDs in the Guideline.

Class	Existing AOIs	New AOIs	Existing MSDs	New MSDs
1	70m	500m	20m	200m
2	300m	750m	70m	300m
3	1000m	1000m	300m	500m
4		1500m		500m
5		2000m		500m

Issue #1

Key terminology used to analyze and establish minimum separation distances within the area of influence are undefined. Among undefined terms are the terms "maximum emissions scenario" and "cumulative effects." Further there is no explanation of how these technical terms are to be used, what they are intended to demonstrate and how the results are to be analyzed and scored.

Issue #2

The Guidelines rely on property boundary to property boundary separation distances in PPS 2020 determinations of land use compatibility whereas OR 419 (air) and NPC 300 (noise) rely on analyses from emissions sources to sensitive receptors. Stronger emphasis on property boundary to property boundary separation distances is needed because EPA approvals are based on different metrics.

Issues #3

Ontario Regulation 419 provides for site specific and technical standards and sector specific regulations can also apply. For example in Hamilton, where benzene and benzo a pyrene are concerned both steel companies are applying for alternative standards. In that case the Draft Guideline states the AOI becomes the minimum separation distance, in this instance 2000 metres. In addition, a cumulative effects analyses needs to be undertaken and classes 2 and 3 of the MECP cumulative effects mapping for these two substances needs to be addressed. The extent of the area affected extends from the harbor to the Niagara Escarpment. Several residential communities are in that area. The policy requires a needs analysis including the examination of alternative sites for new sensitive uses in these areas. Much more discussion is needed to address how alternative standard setting is to work.

Issue #4

Zoning bylaw holding and temporary use provisions are proposed to be used when compatible use analyses are being undertaken. This is an inappropriate use of these Planning Act provisions because these mechanisms are intended for use when non-controversial issues are being resolved and not questions of principle like land use compatibility. Zoning establishes the principle of use in the Planning Act.

Issue #5

MECP suggests the qualified persons needed to implement the land use compatibility analysis are engineers. Engineers do the air and noise analyses required by the Environmental Protection Act. They are not necessarily qualified to do the adverse effects analyses required to set the minimum separation distances between sensitive uses and industrial facilities. Qualified persons from several professions should work as teams and include at a minimum, engineers, planners and public health professions and other professions where specialized backgrounds are required.

What happens now?

The EBR comment period ends on July 3.

There isn't much time to provide comments.

Approval may occur at the end of 2021 or early 2022.

THE ISSUE OF QUARRY FLY ROCK
June 2021. REVISED August 2021

ADVISORY TO REGISTERED PROFESSIONAL PLANNERS

On January 1, 2022, Rule 28 of subsection 0.13 (1) in Ontario Regulation 244/97 of the *Aggregate Resources Act*, comes into effect. It stipulates that the licensee of an aggregate quarry shall ensure that the quarry is in compliance with the Rule as follows:

> a licensee or permitted shall take all reasonable measures to prevent fly rock from leaving the site during blasting if a sensitive receptor is located within 500 metres of the boundary of the site.

Fly Rock discharge from quarry blasting is a contaminant as determined by the Supreme Court of Canada. It is likely to cause an adverse effect under the *Environmental Protection Act.*

Members of OPPI are advised to also consider the directions provided under Policy 1.2.6 under Provincial Policy Statement 2020 to establish the appropriate municipal planning policies as a preventative measure to achieve land use compatibility between quarries that undertake blasting and sensitive land uses.

Aggregates Resources Act and O. Reg. 244/97

The issue of blasting rock in a quarry is addressed by the Ministry of Northern Development, Mines, Natural Resources and Forestry ("NDMNRF") in consideration of applications for a licence under the Act. As of **April 21, 2021**, Ontario Regulation 244/97 under the *Aggregate Resources Act,* was amended to provide the following licence conditions and standards:

Licence Conditions

- No blasting on a holiday, or between 6 p.m. and 8 a.m.
- The Licensee shall monitor all blasts for ground vibration and blast over pressure in accordance with provincial guidelines on limits on blast over pressure and ground vibration for blasting operations.
- The Licensee shall prepare blast monitoring reports according to provincial guidelines on limits of blast overpressure and ground vibration for blasting operations.
- The Licensee shall retain blast monitoring reports for a period of seven years after each blast.

Item 10.

NDMNRF Standards require the following for applications:

Blast Design Report

In the application for a licence to extract or remove more than 20,000 tonnes of aggregate annually, a Blast Design Report is required to be submitted by the applicant if a sensitive receptor is located within 500 metres of the limit of extraction. The Report must demonstrate that provincial guideline, NPC-119-blasting, for blast overpressure and ground vibration can be satisfied.

Site Operations Plan

The applicant's Operations Plan must:

(a) provide details about the frequency and timing of blasts;

(b) provide the number of sensitive receptors that are located within 500 metres of the boundary of the site and the distance from this boundary to each sensitive receptor. A sensitive receptor is defined as a school, child care centre, or any residence or facility at which at least one person sleeps.

Land Use Compatibility - Provincial Policy Statement 2020

Section 1.2.6 sets out provincial policies with respect to Land Use Compatibility. In particular, Section 1.2.6.1 applies to the consideration by NDMNRF and municipalities of proposed quarries as a defined "Major Facility", as follows:

> *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.

This policy is mandatory, and it is to be considered by the ministries and the municipalities.

Conversely, where sensitive land uses are proposed in the vicinity of an existing or planned quarry (major facility), the Province directs the municipalities to apply the following provincial policy 1.2.6.2:

> Where avoidance is not possible in accordance with policy 1.2.6.1, planning authorities shall protect the long-term viability of existing or planned industrial, manufacturing or other uses that are vulnerable to encroachment by ensuring that the planning and *development* of proposed adjacent *sensitive land uses* are only permitted if the following are demonstrated in accordance with provincial guidelines, standards and procedures.

a) there is an identified need for the proposed use;
b) alternative locations for the proposed use have been evaluated and there are no reasonable alternative locations;
c) *adverse effects* to the proposed *sensitive land use* are minimized and mitigated; and
d) potential impacts to industrial, manufacturing or other uses are minimized and mitigated.

The Legal Obligations

The Supreme Court of Canada considered an appeal by Castonguay Blasting Ltd. and dismissed the appeal in favour of the Province of Ontario. The Court decided (October 17, 2013) that "Castonguay was required to report the discharge of fly-rock forthwith to the Ministry of the Environment" (Paragraph 40). In its decision, the Court stated the following relevant reasons:

"Applying these elements to this case, s. 15(1) (*Environmental Protection Act)* was clearly engaged. Castonguay "discharged" fly-rock, large pieces of rock created by the force of a blast, into the "natural environment". There is also no doubt that fly-rock meets the definition of "contaminant". The discharge in this case was "out of the normal course of events" - it was an accidental consequence of Castonguay's blasting operation. Had the blast been conducted routinely, the fly-rock would not have been thrust into the air." (Paragraph 37).

"The adverse effects were not trivial. The force of the blast, and the rocks it produced, were so powerful they caused extensive and significant property damage, penetrating the roof of a residence and landing in the kitchen. A vehicle was also seriously damaged. The fly-rock could easily have seriously injured or killed someone." (Paragraph 39).

The *Environmental Protection Act* is preventive with respect to the discharge of contaminants. The Act and the Regulations apply to prevent the accidental impact of fly rock. Since the licensee is required to keep fly rock on the site during blasting, any discharge of fly rock beyond the controlled blast environment that is not a normal event, i.e. it would have been prevented, must be reported forthwith to the MECP, if the contaminant may likely cause an adverse effect. The Ministry may issue an order for remediation and preventive measures.

Analysis

The new provision for regulating and managing fly rock at a quarry site is contained in Ontario Regulation 244/97 under the *Aggregate Resources Act.* All quarries, both existing and those that are licenced after January 1, 2022, are required:

> "to take all reasonable measures to prevent fly rock from leaving the site during blasting if a sensitive receptor is located within 500 metres of the boundary of the site"

These following observations should be considered by Planners:

- There is no existing provincial government guideline indicating how the licensee is to keep fly rock within the quarry site when blasting. We understand from NDMNRF that this guidance is being prepared.

- The Act and/or the Regulation do not indicate how the proponent is to take all reasonable measures to demonstrate that fly rock can be contained within the quarry site during blasting. We understand from NDMNRF that this guidance is being prepared.

- At least one existing sensitive receptor must be located within 500 metres of the licenced boundary. If a new sensitive receptor is located within 500 metres of the quarry after it is operational, the fly rock rule would apply.

- If there are vacant lots that are designated and/or zoned for sensitive receptors, these are not recognized by this obligation. When these lots are developed and used as sensitive receptors, the fly rock rule will apply where they are within 500 metres of the boundary of the quarry.

- If during blasting, fly rock discharges off the site within the 500-metre area, the municipality should be aware of the obligation by the operator to report this contamination forthwith to MECP.

Blasting is referred to in section 49 of O. Reg. 419/05 "Air Pollution - Local Air Quality". There is a prohibition on the emission of any contamination beyond the limits of the property upon which blasting is being carried out.

At the request of officials in the Ministry of Northern Development, Mines, Natural Resources and Forestry, a meeting was conducted with the advisory authors and staff at the Ontario Professional Planners Institute. At this meeting, several updates were provided, facts and observations were discussed. We made amendments to this advisory to address these matters. The assistance of Ministry officials is greatly appreciated.

The Ministry advised OPPI that it is currently in the process of developing a guideline to assist quarry operators in implementing the fly rock rule.

This Advisory, as revised, is prepared by Mark L. Dorfman, RPP, and George McKibbon, RPP. The views expressed within this Advisory are their own based on research of existing legislation, policies and court records and do not necessarily reflect the views of OPPI or its affiliates. This is not legal advice. Members should rely on relevant laws, standards, by-laws, regulations and legislation that govern this issue.

Addendum

(provided by the Ministry of Northern Development, Mines, Natural Resources and Forestry)

Fly rock risks are managed through a matrix of policies and legislation that deal with a wide range of related topics including operational requirements for blasting, land-use compatibility, protection of the environment as well as public health and safety. The ministry takes this issue seriously and offers the following for OPPI consideration, and further discussion:

Land-use Planning

The Provincial Policy Statement (PPS) provides the policy foundation for regulating development and the use of land in Ontario. It deals with a variety of subjects including public safety, protection of the environment, and natural resources as well as provides for policies for economic growth. It is important to note the PPS exists as a comprehensive framework of policies which cannot be viewed in isolation from other policies. Part III of the preamble states the following:

"*The Provincial Policy Statement is more than a set of individual policies. It is to be read in its entirety and the relevant policies are to be applied to each situation. When more than one policy is relevant, a decision-maker should consider all relevant policies…*"

In addition to the land-use compatibility policies section 1.2.6 referenced in the OPPI paper, the PPS also contains detailed policies related to Mineral Aggregate Resources in section 2.5. Of note, the PPS requires that extraction"*…be undertaken in a manner which minimizes social, economic and impacts*".

These policies are reflected in specific requirements outlined in the *Aggregate Resources Act* (ARA), associated regulations, standards, and policies (discussed further, below) for existing operations and new applications.

The PPS also requires that development, and activities being considered near existing aggregate operations and aggregate deposits, consider and address "*…issues of public health, safety and environmental impact*." In undertaking development, municipal planners are required to consider public health and safety for new developments in relation to existing mineral aggregate operations and resources areas. Municipal planners need to ensure that new development near existing operations, or known resources, do not create or exacerbate public health and safety issues.

Aggregates

Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF) regulates blasting, including fly rock, in quarries (on Crown lands and designated private lands) under the following policy framework which prioritizes the safety and wellbeing of people, the environment and property, while enabling the extraction of aggregate resources:

- *Aggregate Resources Act* — The purpose of the ARA is, among other things, to minimize adverse impact on the environment in respect of aggregate operations (Section 2). Further, the contravention of the Act or Regulations under the Act (including the below-listed Regulation and Standards) is considered an offence[1].
- *Ontario Regulation 244/97* under the ARA — lists prescribed conditions[2] pertaining to blasting, including blasting hours, requirements for blast monitoring[3] (in conjunction with blasting policies; see below), and the new flyrock rule[4].
- The Aggregate Resources of Ontario Provincial Standards
  - *Aggregate Resources of Ontario Technical Reports and Information Standards* — lists requirements for the submission of blast design reports by quarry applicants proposing to extract over 20,000 tonnes/year.
  - *Aggregate Resources of Ontario Site Plan Standards* — require quarry applicants to include details of proposed blasting activities, and information regarding sensitive receptors within 500 m of the quarry boundary.
- The Aggregate Resources Policy and Procedures Manual
  - Policy *A.R. 5.00.10* — covers blasting restrictions across approval instruments
  - Policies *A.R. 2.01.09* (licences), *A.R. 4.01.08* (permits), and *A.R. 3.01.07* (wayside permits) — lay out the Ministry's approach for Blast Design Report and blast monitoring requirements.

Therefore, the new fly rock rule should not be viewed in isolation but rather within the larger ARA regulatory context within which it is nested.

Further, our Ministry is currently working on developing guidance to provide greater clarity and detail on the intent and implementation of the new fly rock rule; guidance may include best management practices and policy guidance.

Environmental Protections

The Ministry of the Environment, Conservation and Parks (MECP) administers the *Environmental Protection Act* (EPA) under which flyrock can be considered a contaminant (pollutant), and the off-site discharge of flyrock is considered a spill[5]. The EPA requires that every person who spills or causes or permits a spill of a pollutant is required to notify MECP's Spills Action Centre[6] and take action to address any adverse impacts caused by the spill[7]. Both NDMNRF and MECP take fly rock incidents very seriously and when off-site discharge of fly rock is reported, or a complaint of off-site impact is received, MECP staff will work with the NDMNRF to assess the incident and determine the appropriate action, which may include additional measures which need to be taken to prevent future off-site fly rock incidents.

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[1] Subsection 57(3) of the ARA
[2] Prescribed conditions are placed on the approval instrument (licence, permit, wayside permit) at the time of approval, and cannot be changed or varied.
[3] Subsection 0.12(5) of O. Reg. 244/97
[4] Subsection 0.13(1) of O. Reg. 244/97
[5] Subsection 91(1) of the EPA
[6] Subsection 92(1) of the EPA
[7] Subsection 91(1) of the EPA

Worker Safety

The Ministry of Labour, Training and Skills Development (MLTSD) administers the *Occupational Health and Safety Act* (OHSA) under which *Regulation 854 (Mines and Mining Plants; R.R.O. 1990*) lists requirements pertaining to blasting, including in quarries. The OHSA and Regulation 854 require that:

- quarry operators conduct a risk assessment of the workplace to identify, assess, and manage hazards, and potential hazards, that may expose a worker to injury or illness. Under such a risk assessment, fly rock would also have to be addressed.
- each blast be designed by a competent person, appointed by the quarry operator. The blast design:
    - must be documented (prior to start of blasting), as well as reviewed and followed.
    - must include guarding procedures to protect workers on site.
- prior to each blast, a siren warning of blast is to be given, and where there are public roads nearby, traffic must be warned of the impending blast, and stopped.
- where workers are required to be present near the blast, blasting shelters must be provided.

Further, in the event of an accident (unintended event), premature or unexpected explosion or defective explosives or detonators, which could result in fly rock leaving the quarry site, the operator must notify the MLTSD