Pit, Quarry and Mineral Extraction

Background
Pit, quarry, and mineral extraction is an important land use issue in East Hants. The current East Hants Official Community Plan contains land use policies related to these industries that need to be updated. This position paper will review pit, quarry and mineral extraction and will make recommendations based upon this review.

Pits and Quarries
In Nova Scotia Pits and Quarries are regulated under the Activities Designation Regulations. Nova Scotia Environment has developed Pit and Quarry Guidelines under the Environment Act. Under these guidelines pit and quarry operations, and aggregate, are defined as follows:

**Pit:**
means an excavation made for the purpose of removing consolidated rock from the environment without the use of explosive.

**Quarry:**
means an excavation requiring the use of explosives, made for the purpose of removing consolidated rock from the environment.

**Aggregate:**
means all consolidated and unconsolidated material, excluding gypsum, limestone, peat or minerals as defined under the Mineral Resources Act.

The Pit and Quarry Guidelines are not applicable to aggregate operations that are operated by the Province and used for public purposes (i.e. by NSTIR for the purpose of building roads); where aggregate is being removed for development and not for aggregate production; or for a pit that is less than 2 ha (4.94 acres). There are five (5) pits and five (5) quarries that have permits to operate in East Hants. All five (5) of the pits are located in the comprehensive planned area of the Municipality and three (3) of the five (5) quarries are located in the comprehensive planned area.

**Pits**
- East Gore Slate Pit - East Gore (1109 Slate Quarry Road PID#45192812)
- Sandy Desert Road Pit - Hardwood Lands (PID#45098829)
- MacPhee Rd. Pit - Nine Mile River (PID#45233657)
- Nova Scotia Sand and Gravel Pit - Hardwood Lands (PID#9091 Hwy 14  PID#45277555)
- Shaw Group - (off MacDonald Road) - Hardwood Lands (PID#45090289)

**Quarries**

- Thomas Quarry - Upper Rawdon (PID#45129509)
- L. Davis Quarry - Hillsvale (961 Ardoise School Rd. PID #45127180)
- David Meehan General Trucking Quarry - Rawdon Gold Mines (PID#45125358)
- Scotia Stone Fraser Road Quarry - East Gore (PID#45189214)
- East Uniacke Quarry - East Uniacke (PID#45155009)

The **Municipal Government Act** gives municipalities very little control over the development and operation of pit and quarry extraction. Section 214(e) of the MGA states:

(214) **Statements of policy in Planning Strategy:**

(e) in connection with a development, the excavation or filling in of land, the placement of fill or the removal of soil, unless these matters are subject to another enactment of the Province;...

Therefore, the Province controls pit and quarry development. However, structures related to the operation of a pit or quarry, not considered fundamental to their operation, such as rock crushers and the bulk storage of aggregates, may be controlled through land use regulation.

The **Pit and Quarry Guidelines** provide separation distances for quarry operations and for pit operations, it also regulates liquid effluent discharge levels; suspended particulate levels; sound level limits; blasting; security; protection of ground water resources; and rehabilitation. However, the guidelines don’t take into consideration potential impacts to residential communities - such as dust and vibration, and the transportation of aggregates from the site. Aggregate extraction also has the potential to impact cultural and natural heritage sites, acid run-off, sedimentation, reduction of agricultural lands, and leaves a scar on the landscape.

The **East Hants Municipal Planning Strategy** currently permits buildings associated with pits and quarries in excess of 10 acres (4.05 hectares) by development agreement in the Rural Use (RU) Designation. The policy P6-7(h) states:

**P6-7 Council shall, within the Rural Use (RU) Designation on lands zoned Rural Use (R4) and in satisfaction of the criteria of Policy P13-9, consider the following uses by development agreement:**

... (h) any business development involving permanent buildings associated with pits and quarries in excess of ten (10) acres (4.05 hectares), primarily engaged in the extraction of ordinary building or construction stone, sand, gravel, or ordinary soil, except temporary pits and quarry operations established solely to provide road building and maintenance materials for the Nova Scotia Government;...
Planning Staff believe that buildings related to pit and quarry extraction should be permitted as-of-right, unless the quarry related building is proposed to be closer than 1 km to the nearest structure not related to a quarry operation and unless a pit related building is proposed to be located closer than 100 m to the nearest structure not related to the pit operation. If the proposed buildings fall within that setback then the development agreement process should be used. The reason for Staff’s recommendation is that the Pit and Quarry Guidelines, from Nova Scotia Environment, identify a separation distance for the actual working face of a pit or quarry to an off-site structure; however, the Guidelines do not provide setbacks for pit or quarry related buildings or structures to the nearest off-site structure. The Pit and Quarry Guidelines state that the working face of a quarry shall be located no closer than 800 m from the foundation or base of a structure located off site; and the working face of a pit shall be located no closer than 90 m to the foundation or base of a structure located off site. Since the Guidelines don’t regulate separation setbacks for structures related to the pit or quarry operations, and uses contained in these buildings could be a nuisance to surrounding property owners, Staff believe that the development agreement process should be used for buildings within the proposed setbacks so that the public may have input into the process. Currently, the four existing quarries are all located more than 1000 m from the nearest nonrelated structure. The five operating pits are located anywhere from 40 m to over a kilometre from the nearest nonrelated structure.

Associated with the extraction of aggregate materials are related industrial operations. Although, East Hants may not have control over the placement of aggregate extraction operations, the Municipality may use the development agreement process to control the development of complementary industrial operations such as asphalt plants, cement plants, concrete plants, and soil mixing; thereby limiting the impact of these operations on neighbouring uses. The current MPS policy does not have a separate policy from P6-7 to regulate pit and quarry related industrial uses, these uses would be considered as part of P6-7. Planning Staff believe that a new policy should be developed to permit aggregate related industrial uses through a development agreement in the Rural Use (R4) zone. A new policy would require a development agreement, no matter what the related pit or quarry size was, and measures could be added to protect the natural environment.

Through a jurisdictional scan, it was noted that Halifax, in the Beaver Bank, Hammonds Plains and Upper Sackville MPS, permits pit and quarry operations and aggregate related industries in their Rural Resource Designation. The policies for the designation require greater visual and physical buffering and separation distances be required between industrial uses and the Single Unit Dwelling (R1) zone.

Halifax, through their MPS policy for Beaver Bank, Hammonds Plains, and Upper Sackville requested that the Province identify areas of high quality gravel and other deposits in order to assist Halifax in developing policies respecting extractive resources and the location of pits and quarries. East Hants should request the same information from the Province as it may also help to promote and support the development of resource-based economic growth.

Halifax has also requested that the Province identify areas underlain with acid-producing slates. This information would also be of use to East Hants, allowing staff to identify areas that may, if developed, have a harmful impact on nearby waterways, or potential potable water sources. Therefore, through the plan review process, Staff are of the opinion that letters should be sent to the Province concerning the identification of high quality aggregate resources and the identification of acid bearing slates.
Staff believe that changes to the policies that would address separation distances for structures related to aggregate extraction, and requirements for buffers should be made.

**Mineral Resources**

As with the aggregate resources the Municipality has no direct authority under the *Municipal Government Act* over mining activities. Mineral rights are government owned and cannot be purchased, they can be leased to an individual or a company. In Nova Scotia, mineral resources are regulated by the *Mineral Resources Act*. Under this act, individuals and companies must obtain a prospector’s license before engaging in exploration for minerals.

The East Hants Municipal Planning Strategy regulates structures related to mineral extraction through the development agreement process. Policy P6-7(g) states:

> **P6-7** Council shall, within the Rural Use (RU) Designation on lands zoned Rural Use (R4) and in satisfaction of the criteria of Policy P13-9, consider the following uses by development agreement:

> *(g)* permanent structures, such as offices or maintenance buildings, associated with any business development engaged in the extraction or processing of metallic and non-metallic minerals including, but not limited to, peat moss, coal, gypsum, limestone, or shales;...

This provision should be changed to allow permanent structures related to mineral extraction activities to be permitted as-of-right, unless the structure is proposed to be closer than 1km to the nearest non-mineral extraction related structure, which takes a similar approach to pit and quarry operations. Municipalities do not have control over the location of mineral extraction operations, therefore the structures related to the mineral extraction operations should be permitted as-of-right, unless these structures are proposed to be located closer than 1km to the nearest non-mineral extraction related structure.

Planning Staff are also proposing that all mineral extraction related industries that accompany mineral extraction sites be permitted in the Rural Use (R4) zone through the development agreement process.

**Proposed Policy Approach**

- Structures that are related to pit, quarry, and mineral extraction be permitted as-of-right unless they are proposed to be closer than 1 km for a quarry or mineral extraction site to the nearest non-resource related structure, and closer than 100 m for a pit to the nearest non-resource related structure, which would then require a development agreement.

- Aggregate and mineral resource related industries in the Rural Use (R4) zone be permitted by development agreement.

- The Province should also be requested to provide identification of high quality gravel deposits and other aggregate deposits, and identification of acid bearing slates