

# REVIEW OF MUNICIPAL QUARRYING POLICY & PRACTICES

Final Report



*Prepared by*



*for*  
Planning and Sustainability Services  
City of Whitehorse

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## 1.0 Introduction

The 2010 City of Whitehorse Official Community Plan (OCP) contains a number of provisions intended to protect the extraction of rock, sand and gravel as a legitimate and necessary land use within municipal boundaries.

Sections 8.1, Industrial Land Use Designation, and 8.2, Industrial Buffers and Separation Distances, of the current OCP provide general direction around quarrying activity on Industrial designated lands. Objective 8.1.3 provides for rock and sand quarries within the Industrial designation as an interim land use predating long-term redevelopment to more intensive industrial uses. Objective 8.2.3 prescribes a 300-metre buffer between extraction areas and Residential designations.

Section 8.3, Natural Resource Extraction, provides for resource extraction and related activities away from existing and future residential neighbourhoods. Presumably, areas quarried under the Natural Resource Extraction designation are intended for restoration to a natural state. Section 8.3 sets out general requirements for new areas, including environmental studies, haul roads, buffers, and access controls.

There are currently about 450 hectares of active quarry leases designated under both Industrial and Natural Resource land uses in the 2010 OCP, virtually all administered by the Government of Yukon's Department of Energy, Mines and Resources (EMR) under the *Quarry Regulations* of the *Lands Act*. However, the establishment of new quarry areas by both the City and private contractors has met with numerous hurdles in recent years.

In 2012, the Government of Yukon decided to not proceed with development of the Steven's Quarry area due to onerous recommendations of the Yukon Environmental and Socioeconomic Assessment Board (YESAB) and opposition from nearby residents. In 2017, Norcope's application to amend the OCP to allow for pit development on vacant Commissioner's land adjacent to the "Utah Siding" site was defeated by Council. More recently, Da Daghay Development Corporation applied for an OCP amendment to allow for quarrying on a Ta'an Kwäch'än Council parcel located about 330 metres from the Valleyview neighbourhood, only to later withdraw that application in part due to significant resident concerns.

The pending update of the OCP has prompted the need to revisit the 2010 OCP's provisions around the quarrying of aggregate materials in the interests of providing more certainty (and success) for future gravel development with the City. Groundswell Planning was retained by the City to:

- 1) Review OCP-level approaches utilized in other Canadian or US municipalities in regards to quarrying, accompanied by a literature review; and
- 2) Review other Canadian and/or US municipal approaches to delineating site preparation and quarrying so as to inform policy and administrative practice around these two activities.

In speaking with City staff on September 4, 2019, Groundswell heard that the City was seeking guidance and real-life examples to inform some of the following key aspects:

- Level of detail appropriate to the OCP;
- Appropriate buffer distances and specifically how they might be applied;
- How the interests of adjacent users might be factored in; and
- Potential thresholds on development time, operating restrictions, etc. in closer proximity to residential areas.

The following report captures Groundswell's findings in regards to these research objectives.

## 2.0 Official Community Plan (OCP) Review

### 2.1 Cross-Jurisdictional Review

Groundswell conducted a cross-jurisdictional review of Official Community Plans (or equivalent municipal planning documents) from across Canada to ascertain how other municipalities are approaching the issue of aggregate extraction. The review found that there is a wide range of approaches employed in municipal growth/land use plans in regards to quarrying activity. It also found that the variation appears to be greater between different regions of the country than between municipalities within those regions, likely due to provincial laws and regulations providing an overarching framework for quarrying activity.

Surprisingly, the most common approach found during the review of OCPs is one of omission. Only 23 of the 58 municipal land use plans that were reviewed made specific mention of aggregate extraction areas or quarries. Municipalities in Ontario appear to be the most consistent and comprehensive in addressing this type of land use in their plans, perhaps not surprising considering the context of considerable urban development pressure. A number of examples from New Brunswick and Newfoundland & Labrador municipalities were found, although these generally lacked the level of detail found in Ontario. Examples from British Columbia and Alberta were less common, and many of these were quite general in nature. No examples were found in plans reviewed from Saskatchewan, Manitoba, Northwest Territories, Nova Scotia or Prince Edward Island. (Some attempt was made to find Quebec plans but language proved to be a barrier and the process deemed to be too time consuming to warrant the effort).

Generally speaking, relatively few Canadian municipal plans appear to address the specific elements that the City of Whitehorse is seeking direction on for the upcoming OCP update. The precise answer for this is beyond the scope of this exercise and would necessitate a more careful review of each jurisdiction's legal and management framework for aggregate extraction and management, along with the division (or overlap) of powers between the province, municipalities, and other levels of government (i.e., counties, regional districts, etc.) for approvals.

The following section provides an overview of findings by jurisdiction, along with specific municipal plan examples that the City may find useful for reference (excerpts from which are included in Appendix A). Note that only those jurisdictions in which OCPs spoke directly to aggregate extraction were further researched for the broader legislative context.

BRITISH COLUMBIA	
Legislative Context	British Columbia has a unique and complex framework for managing quarrying activities. Aggregate extraction itself is not considered by law to be a land use, and is not directly subject to local government land use zoning as a result. Zoning can be used to manage other production aspects such as processing, however. All gravel pits and quarries are regulated under the <i>Mines Act</i> . The Ministry of Energy and Mines may consider, but cannot be bound by, land use zoning when making a decision under the <i>Mines Act</i> regarding a proposed aggregate operation.
Reviewed	21 plans (including 7 Regional District Growth Strategies)
OCP “Hits”	8 – Abbotsford, Chilliwack, Comox Valley Regional District, Fraser Valley RD, Kamloops, Lilloet, Prince George, Squamish
General Observations/ Findings	<p>Aggregate extraction is not directly mentioned in over half of the OCPs reviewed. Furthermore, of the 8 OCPs (or Growth Strategies) that contained quarry-related provisions, only 3 provided specific guidance. The guidance found in the other six was limited to a paragraph or two outlining:</p> <ul style="list-style-type: none"> <li>• General statements acknowledging that resource activities are permitted in and/or restricted to certain areas (Comox Valley RD and Kamloops);</li> <li>• Acknowledgement of provincial jurisdiction and need to work with Province to ensure City’s interests are factored in and appropriate mitigation measures adopted (Abbotsford and Chilliwack)</li> <li>• Generic statements around need to limit impact on neighbouring properties via hours of operation, dust control, screening, access, traffic circulation, site reclamation (Rural Comox Valley District and Kamloops)</li> <li>• Need to follow provincial regulatory authority and/or establish a Soil Removal and Deposit Bylaw (Comox Valley RD)</li> <li>• Use of best management practices to assist with flood management and prevention (Fraser Valley RD)</li> <li>• Limitation of extraction activity to excavation, screening and storage of materials (versus crushing or asphalt manufacturing) without Temporary Industrial Use Permits (Lilloet)</li> </ul> <p>OCPs from Prince George and Squamish were more detailed and comprehensive and are included in Appendix A. Numerous OCPs included maps indicating high potential (or proven) aggregate resources.</p>
Specific Guidance	<p>Prince George – 500m buffer from future urban development</p> <p>Some OCPs refer to Soil Removal and Deposit Bylaws for more detailed guidance about operations</p>
Examples	<p>Rural Comox Valley Regional District and District of Squamish – examples of the more generic OCP samples</p> <p>Prince George – an example of a more detailed, instructive OCP</p>

<b>ALBERTA</b>	
Legislative Context	Alberta Environment and Parks regulates pit operations in the province under a variety of acts (including the <i>Environmental Protection and Enhancement Act</i> and <i>Public Lands Act</i> ), codes of practice, and regulations. For any relevant pit operations, municipalities are responsible for zoning, land use planning, and land use bylaws. The Alberta equivalent of the OCP is the Municipal Development Plan (MDP).
Reviewed	4 MDPs - Red Deer, Calgary, Edmonton, St. Albert
OCP “Hits”	3 – Red Deer, Calgary, Edmonton
General Observations/ Findings	<p>None of the three Municipal Development Plans found that made specific reference to resource extraction provided specific direction; rather, provisions speak in broader language about:</p> <ul style="list-style-type: none"> <li>• Need to protect aggregate sources from premature urban development (Calgary, Edmonton)</li> <li>• Need to separate aggregate operations from incompatible uses (Red Deer, Edmonton)</li> <li>• Mitigation or minimization of resource extraction impacts (Edmonton, Calgary, Red Deer)</li> </ul> <p>Red Deer’s MDP includes a map indicating aggregate sources.</p>
Specific Provisions	There were no specific provisions (i.e., setback distances) found in any of the OCPs reviewed
Examples	Red Deer, Edmonton and Calgary

<b>MANITOBA, SASKATCHEWAN, NORTHWEST TERRITORIES</b>	
Legislative Context	N/A
Reviewed	11 plans - Grande Prairie, White City, Saskatoon, Regina, Moose Jaw, Brandon, Steinbach, Churchill, Yellowknife, Inuvik, Fort Smith
OCP “Hits”	0

ONTARIO	
Legislative Context	<p>The <i>Aggregate Resources Act (ARA)</i> has authority over gravel extraction and quarrying in Ontario. The ARA, the regulations and the provisions of licences and site plans apply despite any municipal bylaw, official plan, or development agreement and, to the extent that a municipal bylaw, official plan or development agreement deals with the same subject matter as the Act, the regulations or the provisions of a licence or site plan, the bylaw, official plan or development agreement is inoperative. Municipalities can control the location of aggregate operations through the land use planning process.</p> <p>A 2014 Provincial Policy Statement that minerals and petroleum resources shall be protected for long-term use. Some Ontario municipalities are organized into regional municipalities, counties, and townships. The OCP equivalent in Ontario is the Official Plan.</p>
Reviewed	8 plans – London, Hamilton, Milton, Kenora, Orillia, Township of King, Guelph, Ottawa
OCP “Hits”	6 – Milton, Kenora, Orillia, Township of King, Guelph, Ottawa
General Observations/ Findings	<p>Municipalities in Ontario would appear to consider aggregate resources in their guiding plans much more carefully than their western and eastern counterparts. The six examples found were all fairly detailed and lengthy (750 – 2000+ words); some were similar in nature to Whitehorse’s current OCP provisions. Perhaps the most noteworthy difference between the Ontario examples and others found is the context; Ontario plans seem to focus more on protecting aggregate areas from (premature) development and/or incompatible adjacent development than on protecting other land uses from aggregate extraction.</p> <p>Some of the themes and elements contained in Ontario Official Plans in regards to quarrying include:</p> <ul style="list-style-type: none"> <li>• Other permitted uses in extraction areas (Milton, Ottawa)</li> <li>• Need for buffers from development</li> <li>• Provincial and municipal roles and authorities around aggregate (Kenora, Guelph, Orillia)</li> <li>• The criteria upon which new applications for extraction will be evaluated (including aggregate availability, impacts, groundwater, adjacent land uses, heritage, transportation, proposed rehabilitation and future compatibility, etc.) (Milton, Guelph, Township of King, Ottawa)</li> <li>• Maps indicating areas of known deposits (Milton, Guelph, Orillia, Kenora, Township of King)</li> <li>• Provisions outlining the conditions upon which development could proceed in identified aggregate areas (Kenora, Milton, Orillia, Township of King)</li> <li>• Encouragement of asphalt recycling (Guelph, Milton)</li> <li>• Addressing of wayside pits, quarries and portable asphalt plants (Milton, Kenora, Ottawa)</li> </ul>
Specific Provisions	<p>Milton – 500m buffer from residential development; 1000m buffer for a portable asphalt plant</p> <p>Township of King – mention of new development within 300m (from a pit) or 500m from a quarry requiring consideration of compatibility, specific direction around traffic, haul routes</p> <p>Township of King – specific direction around traffic, haul routes</p> <p>Ottawa – 500m buffer between Bedrock Resource Area and incompatible development; 300m from a pit</p>
Examples	Township of King, Orillia, Ottawa

<b>NEW BRUNSWICK</b>	
Legislative Context	<i>Quarriable Substances Act</i> and <i>Crown Land Quarries Policy</i> govern quarrying activities on Crown lands. Local governments are responsible for land use planning and zoning, including regulating aggregate areas on private lands. New Brunswick's OCP equivalent is the Municipal Plan.
Reviewed	4 plans - Town of Riverview, Moncton, Fredericton, St. John
OCP "Hits"	2 - Moncton, Saint John
General Observations/ Findings	Both Municipal Plans refer to Rural Resource or Resource designations intended in which aggregate extraction is a permitted activity. There is only general mention of operating practices and no specific buffers or other guidance provided.  The detail provided is primarily the information or conditions which must be satisfied to allow for a new extraction. These include land use compatibility, stormwater plan, mitigation of impacts, hours of operation, setbacks from other roads/uses, location of entrances and exits, signage, rehabilitation, security, etc.
Specific Provisions	No specific guidance in regards to setbacks, etc.
Examples	Moncton and Saint John

<b>NOVA SCOTIA/PRINCE EDWARD ISLAND</b>	
Legislative Context	N/A
Reviewed	6 plans - Truro, Yarmouth, Lunenburg, Summerside, Charlottetown, Town of Port Hawkesbury
OCP "Hits"	0

<b>NEWFOUNDLAND &amp; LABRADOR</b>	
Legislative Context	<i>Quarry Materials Act</i> and <i>Quarry Materials Regulations</i> govern quarrying activities. Local governments are responsible for land use planning and zoning. The OCP equivalent is the Municipal Plan.
Reviewed	6 plans - Cornerbrook, Gander, St. John's, Cow Head, Grand Bank, Appleton
OCP "Hits"	5
General Observations/ Findings	Municipal Plans in Newfoundland and Labrador take a similar approach to that found in New Brunswick with the designation of Rural or Rural Resource areas in which a variety of land uses – including aggregate extraction – is permitted. For the most part the provisions contained in NL plans are quite general in nature and speak to the broader range of activities allowed. The minimization of environmental impacts, particularly on watercourses, is a recurring element.
Specific Provisions	Gander – buffer of “at least 300m” around resource areas and abandoned quarries to protect from “conflicting land uses” Appleton – 500m buffer from “incompatible uses”; allowance of solid waste disposal, scrap yards on exhausted sites Cornerbrook – mention of specified or temporary operating period to ensure that quarries do not become heavy industrial areas
Examples	Corner Brook



## 2.2 Literature Review

An Internet-based search for information or guidelines pertaining to municipal quarry management best practices yielded minimal results. “Best practices” literature is primarily geared towards quarry operators and provincial regulators and focus on pit development and management procedures designed to minimize environmental impacts and optimize future reclamation. As such, the information is generally operational and regulatory in nature, versus higher-level. Furthermore, most of the guides pertain to a rural context.

Some of these guiding documents include the following:

- *Alberta’s Code of Practice for Pits (2004)*
- Health, Safety and Reclamation Code for Mines in B.C.
- *Guide to Preparing Mine Permit Applications for Aggregate Pits and Quarries in British Columbia (2010)*
- *Aggregate Resources of Ontario: Provincial Standards (1997)*
- Pit and Quarry Guidelines – Nova Scotia Environment and Labour
- New Brunswick Department of Environment and Local Government Sand and Gravel Pit Guideline (2014)

Two publications commissioned by the Saskatchewan Association of Rural Municipalities have a municipal focus and include some best practices and orientation to the aggregate industry that may be useful to the City:

- *Got Gravel? Aggregate Management Strategies for Rural Municipalities in Saskatchewan*
- *Rural Municipality Aggregate Resource Manual*

Further information about all of the above noted sources is included in the References section.

### 3.0 Zoning and Soil/Deposit Removal Bylaw Review

#### 3.1 British Columbia

Due to British Columbia’s unusual legal framework for quarries, Groundswell focused its research on the Soil Deposit and Removal bylaws, the primary instrument through which municipalities control these types of activities.

Five soil removal/deposit bylaw examples were reviewed: Squamish<sup>1</sup>, Prince George, Kelowna, Langley and Langford. In addition, the City of Prince George was contacted. The complete Prince George bylaw is included in Appendix B.

BYLAW ELEMENT	GENERAL APPROACH	NOTEWORTHY EXAMPLES OR EXCEPTIONS
<b>Applicability</b>	The bylaws generally apply to all lands within the municipalities. Sand, gravel, rock, and other quarried earth materials are all captured by the definition of “soil” in the bylaws.	The Langley bylaw does not apply to commercial extraction operations.
<b>Exemptions</b>	Minor soil volumes are a common exemption (ranging from 50 -100m <sup>3</sup> ), as are municipally initiated works, emergency works, road/highway construction, landscaping/horticultural operations, building construction, solid waste processing and disposal, trail maintenance or development, etc.	Langley has a unique clause in which removal is exempt if deemed necessary for a land development project (S.6g). Kelowna exempts removal required as a part of a concrete and asphalt plant operation permitted under the Zoning Bylaw.
<b>Applications</b>	Applications typically include the purpose of the proposed removal, land information, detailed site and operating plans (quantities/volumes, hours of operation, access routes, noise and dust control, visual screening, erosion and sedimentation control, etc.), and reclamation plans. Some require certification from a Professional Engineer or equivalent.	Environmental assessments are required by Langley and Kelowna.
<b>Tiers</b>	Aside from the thresholds established in the Exemptions, most bylaws treat all applicable removals equally.	Prince George has short term and long term permits. Short term permits apply to: 1+ ha parcels, 25,000m <sup>3</sup> or less, and where removal improves the suitability of land for a use permitted by zoning or future land use as set out in the OCP. Long term permits apply to areas identified as Designated Soil Removal or Deposit Area in Schedule A of the bylaw.
<b>Approvals</b>	The bylaws allow for the municipality to refuse a permit if the removal will: result in damage or destruction of watercourses, structures or adjoining properties; threaten public safety or health; result in future use of the property in a manner inconsistent with the current zoning and/or future land use in the OCP.	Kelowna bylaw allows for adverse effects to “air, light, or view of adjoining or adjacent properties” or “substantial alterations to appearance and nature of surrounding area” to warrant refusal of an application.
<b>General Conditions of Permit</b>	General conditions are included in most bylaws. These include: the keeping of drainage facilities, highways and sidewalks free of soil; avoidance of damage of highways and adjacent properties; avoidance of sedimentation of watercourses; repair of any damage, etc.	Prince George specifies that “Fugitive Dust” should not escape the site so as to significantly injure or damage human health, plant/animal life, or cause unreasonable interference with enjoyment of life or property. Berms are required for crushers/screeners. Squamish disallows washing/screening/crushing unless the parcel is zoned for the use.

<sup>1</sup> Soils Management Bylaw

BYLAW ELEMENT	GENERAL APPROACH	NOTEWORTHY EXAMPLES OR EXCEPTIONS
<b>Buffers</b>	The bylaws generally do not specify minimum buffers; these are presumably determined on a discretionary basis. Bylaws generally speak to how re-grading relates to neighbouring properties.	Prince George specifies a buffer of 50m around perimeter of property. Extraction exceeding more than 25,000m <sup>3</sup> needs a minimum setback of 100m from the boundary of any land zoned for residential or institutional use, unless otherwise consented to by the property owner. A 200m buffer from parcel boundary is required for screening/crushing.
<b>Hours of Operation</b>	Most bylaws do not specify operating hours.	Prince George limits operations to Monday – Friday 8:00 am – 7:00 pm and weekends/holidays – 9:00 am – 5:00 pm. There is potential for up to 30 days of longer operating hours for specific large projects and demonstrated needs. It requires reduced operating hours (compared to extraction) for screeners/crushers.
<b>Permit Timeframe</b>	Most bylaws (except Kelowna) specify maximum timeframes for removal, although there are usually allowances for extensions or successive permits. Prince George’s Short Term Permits have a 36-month limit. Langley permits are valid for 1 year with renewal up to 12 months with an allowance for additional renewal or extension if justified for completion. Squamish permits are valid for 1 year.	Langford has a tiered approach to permit timeframes geared to extraction volume, with 1 year allowed for commercial soil enterprises.  Prince George requires any area brought to final grade to be reclaimed with one year of final grading.
<b>Reclamation</b>	Reclamation is mostly indirectly addressed through the requirement for site/operating plans in bylaws.	Prince George has very specific reclamation requirements around maximum slopes, surface soils, revegetation, etc.
<b>Security</b>	All bylaws except Langford specify a security deposit, albeit using different approaches (i.e., \$/number of hectares, \$/m <sup>3</sup> of soil removed). Kelowna’s is not mandatory; City may require a deposit in the amount of 125% of the estimated cost to implement monitoring plans and recommendations for the site.	Squamish has a tiered security rate system, with set amounts up to 40,000m <sup>3</sup> and a \$0.30/m <sup>3</sup> after that. Prince George increases the security amount for slopes of 3:1 or greater from \$5000 to \$7000.

## Prince George Information/Perspectives

*Q: How successful has the Soil Deposit and Removal Bylaw been in addressing nearby resident concerns and holding proponents accountable to their original extraction plans? How have the issues of “fugitive dust” and “reasonable enjoyment of property” been dealt with?*

*A:* The bylaw has been reasonably successful but it hasn’t eliminated conflict around gravel pits near residential areas in Prince George. There is sometimes conflict with the Ministry of Mines requirements and Prince George has had to modify its rules. One challenge has been short-term permits getting repeatedly renewed, which defeats the purpose of short-term permits. Long-term permits are non-transferable. The City encourages proponents to gather letters of support from nearby property owners, forcing them to work to address concerns in advance. Buffers are a key tool for ensuring dust and property enjoyment are protected. Enforcing the bylaw is an ongoing challenge for the City.

Contact: Melissa Nitz, Planner melissa.nitz@princegeorge.ca

### 3.2 Alberta

In order to establish an aggregate development on private land, a Development Permit is required from the municipality. Through the Development Permit process, the municipality can stipulate conditions related to an approved pit. Possible conditions could relate to location, hours of operation, buffers, noise, dust, haul routes, and traffic control. The municipality's development authority will have more flexibility for attaching conditions to a Development Permit where the activity is listed as a discretionary use under the land use bylaws. The municipal requirements may go beyond what is required provincially, but they cannot contradict provincial laws.

One unique approach found in Alberta is the use of Community Aggregate Payment (CAP) Levy bylaws. Approximately half of municipalities have adopted their use under the Municipal Government Act. The bylaw allows municipalities to report shipments based on tonnage and pay a levy up to a maximum rate per tonne extracted. The monies collected are theoretically intended to mitigate negative impacts from extraction activities, but in practice are used for a broader suite of projects.

Three zoning bylaws were reviewed: Edmonton, Calgary, and Red Deer. (Note that all three were also reviewed for OCP (or equivalent) provisions around quarrying in the previous section). Edmonton and Calgary were contacted for more information. The site preparation provisions of the Edmonton zoning bylaw is included in Appendix C.

BYLAW ELEMENT	RED DEER	CALGARY	EDMONTON
<b>Uses/ Definitions</b>	No use definition pertaining to quarrying	“Pits and Quarries” are defined in the bylaw.	Quarrying is included under the “Natural Resource Development” use definition. Section 56 of the General Development Regulations speak to “Excavation, Stripping and Grading” – defined as excavation other than for construction or building purposes.
<b>Zone(s)</b>	No applicable zone	Pits and Quarries are an allowed use within a Direct Control District. They are not an allowed use within other zones/districts.	Included as a discretionary use in the Medium and Heavy Industrial, Community Service 3/4, Agricultural, Urban Reserve, and Industrial Reserve zones
<b>Restrictions or Regulations</b>	No general provisions or regulations pertaining to quarrying or excavation	No general provisions or regulations pertaining to quarrying or excavation	No specific guidance given to Natural Resource Development in the permitted zones. S.56 specifies a number of requirements for applications for a Development Permit to excavate. Approval is contingent on the operation being: carried out with a “minimum of dust and environmental disturbance”, necessary for use and development of land, and conforming with historical resources legislation. The Development Officer can prescribe specific methods to prevent and control dust or other nuisance from the operation.

#### Edmonton Information/Perspectives

*Q: Section 56 of the ZB allows for excavation and grading for non-construction related purposes with no specific limits. Are there any limitations on the scope or nature of an activity for which approval would not be granted? For example, if the site was located near a residential development, would the application be treated differently? How are impacts managed?*

*A: Every application is reviewed and approved (or not) on the basis of the specific circumstances around it; there is no threshold at which the City would use a different instrument. Careful attention must be paid to the proposed end use to ensure that applications aren't site preparation “disguised” as gravel pits. The City's information requirements are fairly onerous; access, culvert crossings, loads, screening measures, locations and staging of stockpiles, etc. are specified. The permits usually specify where processing and stockpiling can happen, hours of operation, etc. Time limits are often imposed*

on development permits. The City keeps proponents and developers accountable through enforcement. Calls from affected residents about permit breaches are relatively common, and the City will shut operations down immediately.

Contact: Gail Hickmore, General Supervisor, Development Approvals [gail.hickmore@edmonton.ca](mailto:gail.hickmore@edmonton.ca)

### Calgary, AB Information/Perspectives

*Q: Are there any thresholds or limitations around site excavation tied to land development - for example, quantities extracted, timeframe for extraction, etc.? In theory, could a subdivision developer be allowed to effectively mine gravel in proximity to residential areas for an indefinite period of time under the auspices of site preparation, without requiring rezoning or OCP amendment? How does the Direct Control District zoning approach work in the context of pits/quarries located close to residential areas? How are impacts managed?*

*A:* There is only one active quarry site in Calgary, the Lafarge site located in the northwestern corner of the city. The development permits for the quarrying involve what appear to be two sets and renewals dating back to the early 1990s.

The Calgary *Municipal Development Plan* generally encourages protection of sand and gravel resources, and encourages that sand and gravel-related uses that cause nuisances locate away from urban development that it may impact. There do not appear to be any requirements for a policy amendment to update Map 6 of the *Municipal Development Plan*, which includes mapping of sand and gravel resources.

The use of the Direct Control District for urban gravel pits ensures that Council can make the ultimate decision about whether the uses can be allowed in the proposed location. The definition of “Pits and Quarries” does not include any rules regarding time limitations nor transition to other uses. Rules regarding time limitations and transitions could be put in a direct control bylaw.

Of note is the Quarry Park area of Calgary, which prior to development starting in 2006 was a quarry for approximately 40 years. Remediation of quarry sites is possible.

There is no specific direction in the Land Use Bylaw around site excavation or preparation. Any specific guidance would have to be provided in a Direct Control District or the development permit conditions of approval

Contact: Ezra Wasson, Planner II [ezra.wasson@calgary.ca](mailto:ezra.wasson@calgary.ca)

### 3.3 Ontario

The *Aggregate Resources Act (ARA)*, the regulations, and the provisions of licences and approved site plans apply despite any municipal bylaw, official plan, or development agreement and, to the extent that a municipal by-law, official plan or development agreement deals with the same subject matter as the Act, the regulations or the provisions of a licence or site plan, the by-law, official plan or development agreement is inoperative. Municipalities can control the location of aggregate operations through the land use planning process.

Three zoning bylaws were reviewed: Ottawa, Township of King, and Orillia. (Note that all three were also reviewed for OCP (or equivalent) provisions regarding quarrying).

BYLAW ELEMENT	OTTAWA	TOWNSHIP OF KING	ORILLIA
<b>Definitions</b>	“Mineral extraction operations” are defined and include related uses such as asphalt plants or concrete batching. “Wayside pit” and “wayside quarry” are defined as temporary, used by a public authority, located outside of right-of-way and used for a road project.	“Wayside pit or quarry” is defined as temporary pit used by a public authority, located outside of right-of-way and used for a road project. No other definition was found for quarries.	“Pit, Sand and Gravel” is defined, as is “Aggregate Crushing, Processing and Screening Plant”. “Wayside pit or quarry” is defined as temporary pit used by a public road authority, located outside of right-of-way and used for a road project.
<b>Zones</b>	S92 allows for wayside pits and quarries and related asphalt plants and portable concrete plants to be permitted in all zones other than Environmental Protection. Mineral extraction is limited to the Mineral Extraction zone. Other interim activities are permitted in the Mineral Aggregate Reserve zone.	No specific permitted zone for Wayside pits and quarries was found.	Aggregate Crushing, Processing is a permitted use in one Industrial zone. No mention of Pits as a permitted use was found in any zone.
<b>Restrictions or Regulations</b>	S.67 provides for minimum 150m buffer between a Mineral Extraction Pit Only or Mineral Aggregate Reserve zone boundary and new buildings consisting of dwelling or rooming units.	S3.38 prohibits the establishment of pits or quarries and buildings/structures for purpose of processing, washing, etc. except as provided for in bylaw.	

### 3.4 New Brunswick

Two zoning bylaws were reviewed: Saint John and Moncton (note that both were also included in the OCP review). Municipal staff at both cities were contacted for more information. The site preparation provisions of the Saint John zoning bylaw are included in Appendix C. The Pits and Quarry Zone section of Saint John’s bylaw is included in Appendix D.

BYLAW ELEMENT	SAINT JOHN	MONCTON
<b>Definitions</b>	“Pits” and “quarries” are defined uses. S.9.7(2) also addresses the excavating of land.	S.21 Making of land by cutting and filling. “Quarry” is a defined use, as is “borrow pit” (different term but same meaning as “pit”).
<b>Zone</b>	Pits and Quarries are permitted in the Pit and Quarry Zone, which is intended for land outside the Primary Development Area designated Rural Resource.	Borrow pits and extraction are a conditional use in the Rural RR-2 zone.
<b>Restrictions or Regulations</b>	The Pit and Quarry zone regulations are comprehensive. Setbacks are 150m from residential lots for pits and 200m for crushers. Excavating of land greater than 1m in depth is generally prohibited if cumulative ground area is greater than 62.5m <sup>2</sup> . Exceptions may be granted where cumulative area isn’t greater than 500m <sup>2</sup> , excavating ceases 365 days after approval, land affected will not be sloped steeper than 2:1, and treatment with topsoil and seeding.	S.21 specifies that cutting or filling of land to a depth or height exceeding 1m may trigger terms and conditions by the Planning Advisory Committee. However, the requirement does not extend to cutting/filling that is directly related to subdivision development site preparation work. S.82 says that borrow pits and quarries, in addition to requirements of a development permit, require a site rehabilitation plan to ensure ultimate reuse of the property. In addition, the developer must provide and adhere to a development plan including provisions for water control, phasing, and processing.

## Saint John Information and Perspectives

*Q: Section 9.7(2) allows for excavations in excess of 1 metre up to specific area and time thresholds. How does the City typically deal with excavations that are in excess of that size, for subdivision development or otherwise, particularly if they are located near residential areas? How are impacts managed?*

A: The limits typically don't pose a problem to site preparation or subdivision development, as there is an exception in the bylaw whereby development and zoning approval trigger permission for site preparation without specific limits. (Note: the section of the bylaw could not be found/identified by the interviewee). The Planning Advisory Committee can also grant variances and the City has utilized temporary use permits for site preparation activities where the bylaw may be contravened.

Section 9.7 is believed to be in the bylaw due to a past challenge around significant deposit of material close to a residential area. Saint John would typically not look at rezoning a parcel to the Pit and Quarry zone to accommodate longer-term extraction unless it was on the outskirts of the city and/or in industrial areas. The interviewee noted that ongoing site preparation (which in the Saint John context is more typically quarrying due to the local topography) is an ongoing challenge, and to some extent the City has to take developers "at their word" that a new subdivision will be the end use of a property undergoing excavation. So long as subdivision approval is still valid, a proponent may generally remove material.

To mitigate impacts on nearby areas, the City typically focuses on load limits on City and provincial roads, as well as working with the noise bylaw provisions.

Reference: Ken Melanson, Manager of Planning    ken.melanson@saintjohn.ca

## Moncton Information and Perspectives

*Q: Section 2.3 of the ZB requires Committee oversight for cutting and filling of land in excess of 1 metre, but cutting or filling of land directly related to subdivision development site preparation work is not required. Are there any limitations on the nature of subdivision development for which the exemption applies? For example, if the site was located near residential development and excavation volumes and proposed timeframe were significant, would such a project be treated differently? How are impacts managed?*

A: The 1 metre trigger stems from the *Community Planning Act* in New Brunswick, as it constitutes "development." There is no real threshold at which the exemption would not apply. Development approval applications are considered by the City on a case-by-case basis. If the application pertains to subdivision development, Moncton has a guiding document (2019 Subdivision Development Procedures, Standards and Guidelines) that developers must use for guidance, along with a security they provide to the City. The City considers impacts on nearby residents or other affected property owners through the approval process. Phased approaches to site preparation are common. Limits on hours of operation and timeframe for preparation can be placed on applicants.

Contact: Allan Breau    allan.breau@moncton.ca

## 4.0 Yukon Context for Gravel Resource Management

Groundswell conducted a cursory review of the Yukon gravel management framework to identify potential overlaps and redundancies between the City's OCP and Zoning Bylaw guidance and requirements imposed by other orders of government.

### 4.1 Territorial Regulations

Dredging and quarrying activities on Yukon lands are regulated under the *Quarry Regulations* of the *Lands Act*. Clauses 24-40 Operation and Rehabilitation Plan set out the general requirements for operation and final reclamation of a pit, including some a few specific, prescriptive requirements. Clause 39 specifically prohibits quarries from being located within "the permissible distance from land zoned for residential use as designated within a municipal zoning bylaw..." Where such a bylaw does not exist, the regulation requires a minimum 100 metre buffer from residentially zoned land.

### 4.2 Yukon Environmental and Socioeconomic Assessment Act

The *Assessable Activities, Exceptions and Executive Committee Projects Regulations* under the *Yukon Environmental and Socioeconomic Assessment Act* (YESAA) allow for the discretionary review and/or approval of gravel extraction as follows:

- Part 11 Air Emissions Item 1 requires "quarrying, crushing or screening of minerals" to be assessed *except for* in an excavation covering an area of 4 ha or less;
- Part 13 Miscellaneous Item 15 "On Crown land or settlement land, other than an Indian reserve, the extraction of sand, gravel, stone, marl, loam, clay or volcanic ash" requires the aforementioned to be assessed *except for* personal use of small amounts of material from Crown/settlement land and extraction from a public pit or pit subject to a lease issued under the *Quarry Regulations*; and
- Part 13 Miscellaneous Item 16 "Operation, decommissioning, abandonment or expansion of a gravel or sand pit or stone quarry" requires the aforementioned to be assessed if it involves use of explosives, power-driven machinery, moving earth or clearing land using power-driven machinery, fuel storage, etc.

### 4.3 Alignment Between City and Other Legislative Requirements

The combination of *Quarry Regulations* provisions and assessment "triggers" under YESAA provide for considerable oversight and control over gravel pits in the City of Whitehorse. The City's OCP and Zoning Bylaw provisions can be viewed as an augmentation and enhancement of both quarry and environmental assessment legislation that would apply to gravel pits within the municipality. Those provisions do not appear to conflict with the *Quarry Regulations*, in the instance of pits on Crown land, and provide sufficient direction to those located on private and/or settlement lands.

Extensive gravel extraction under the auspices of site preparation on Crown, settlement or private lands would almost certainly trigger the Part 13 Item 16 provisions of the regulations under YESAA. This allows for a fulsome consideration of negative impacts from the proposed activity, including the opportunity for input from affected parties. Yukon Environmental and Socioeconomic Assessment Board (YESAB) recommendations could help to guide the terms and conditions of City development permits for site preparation. In this sense, the ambiguity around site preparation involving extensive excavation could be indirectly clarified through the outcomes of the YESAA process.



## 5.0 What it all Means: Lessons and Approaches for City Consideration

### 5.1 *Site Preparation vs. Quarrying*

The ambiguity around what constitutes site preparation versus quarrying in other municipalities was not readily clarified through this limited research exercise. However, some findings may provide useful insight to the City.

Some municipalities in British Columbia render the distinction largely irrelevant by including all soil (including gravel) extraction, regardless of purpose, under the purview of soil deposit and removal bylaws. Generally these bylaws provide specific guidance, but allow for discretionary consideration of individual proposals.

The logical mechanism in which municipalities may delineate their interpretation of site preparation versus quarrying is the zoning bylaw. Indeed, some bylaws directly addressed site preparation and the requirements pertaining to it. In Saint John and Moncton, it appears that the activity generally falls under the discretionary review for development approvals and projects' unique circumstances are addressed through the conditions of development permits.

### 5.2 *Level of Detail Appropriate to the OCP*

The management of gravel resources at the municipal and provincial levels is a complex area of legislation and approaches differ from jurisdiction to jurisdiction. The same applies to the matter of OCPs and how they address the issue.

In numerous jurisdictions, OCPs reviewed are completely silent, or very brief, on the issue of gravel extraction. This may be due to overarching provincial jurisdiction with respect to gravel, municipal legislative powers, or the intention of municipalities to restrict the activity altogether within their boundaries. Saskatchewan, Manitoba, Northwest Territories, Nova Scotia are examples of such jurisdictions.

In a few other jurisdictions, OCP (or equivalents) contain considerable detail and guidance on the matter of gravel extraction. For example, the Official Plans of the Ontario municipalities reviewed are quite prescriptive and comprehensive in nature. The underlying emphasis of both the Ontario and Alberta municipal planning documents reviewed is the protection of aggregate areas from nearby development, not vice versa.

Given the overarching conclusion that there is no one standard approach that the City should be adhering to, Groundswell concludes that the level of detail included in the City's current OCP could be considered appropriate so long as it serves the City's needs. Maintaining a similarly detailed approach in the upcoming OCP would put the City on par with Ontario jurisdictions and far exceed what is generally found in municipal planning guiding documents in other parts of Canada.

The determination of appropriate level of detail may rest on the consideration of how prescriptive provisions may unnecessarily (or unfavourably) limit the City's ability to adapt to project specific or changing circumstances. There may be merit to utilizing the OCP for the discussion of broader purpose, intent, and desired outcomes for gravel quarries, and essentially leaving the details to the Zoning Bylaw. Regardless of the level of detail, the approaches of other jurisdictions points to a different emphasis, in which aggregate resource areas are the focus of protection (versus other development).

### 5.3 *Buffers*

The City's current 300 metre buffer between gravel extraction areas and residential areas is generally in the range of buffers applied by municipalities in other parts of Canada, and in a few cases exceeds them. Two of the Ontario municipalities reviewed applied 300 metre buffers for gravel operations (and 500 for rock quarries), whereas another used 500 metres. The Saint John Zoning Bylaw specifies a minimum 150 metres from residential lots. Most of the OCP and zoning bylaws reviewed were silent on the matter of buffers. Ottawa's Zoning Bylaw specifies 150 metres between a mineral extraction pit and new residential development (although it uses 300 metres in its OCP). The Newfoundland and Labrador OCPs reviewed used a minimum of 300 metres.

The British Columbia soil deposit and removal bylaws reviewed do not generally specify buffers, but rather leave them to up to the discretion of municipal staff and/or permitting bodies. The Prince George bylaw includes a 100 metre buffer but

this is presumably in the context of short term extraction; longer term extraction, or the establishment of pits, would force the re-designation of a parcel as a Soil Removal Area and, presumably, a larger buffer.

The wording around the application of buffers is similarly general to the language utilized by the City currently. The few instances of specific wording found used the boundary (or lot) line of a residential parcel from a gravel operation. There was no clear reference to which physical element of the gravel operation would be used as the other “marker”, however. The Prince George Soil Deposit and Removal Bylaw offers some clarity by differentiating general extraction (100m buffer) from screening/crushing operations (200m buffer).

#### 5.4 *Interests of Adjacent Users*

While Groundswell found many references to the consideration of impacts on adjacent property owners and/or residents in the OCPs and soil deposit/removal bylaws reviewed, it found no specific guidance on how these would ultimately be factored in, or weighed, during the review/approval process. It would appear that municipalities reserve the ability to review and evaluate the merits and negative impacts of each individual gravel pit and/or site excavation through the zoning and/or development approval process and the resident notification and/or public engagement activities embedded within that process. In this regard, the City’s current approach is consistent with that of the municipalities reviewed for this exercise.

#### 5.5 *Other Operating Thresholds*

Best practices literature for municipal management of gravel pits was very difficult to find. Most of the best practices guides available are developed by provincial authorities and advise operators on how to mitigate environmental impacts and optimize reclamation largely in a rural context. Some of this advice would certainly apply to urban gravel pits, but the issue of managing impacts on nearby residents is largely unaddressed.

Management of negative impacts from gravel operations revolves around three key externalities: noise, dust, and aesthetics. Again, while numerous references in OCPs and bylaws were found about the need to address these issues, there was little detail provided. The Saint John Zoning Bylaw and Prince George Soil Deposit and Removal Bylaw were notable exceptions and are included in the appendices for City review.

Aside from buffers, time limits were the most common threshold found. Maximum time periods for soil excavation (not specific to gravel pits per se) were outlined in several British Columbia soil deposit and removal bylaws and the Saint John Zoning Bylaw. These thresholds ranged from one to three years.

#### 5.6 *Recommendations*

Moving forward, the City of Whitehorse may wish to consider:

- A shift in OCP tone and language to emphasize the protection of valued known aggregate deposits within the City from incompatible adjacent development, including the identification of their location (if possible);
- Maintaining or reducing the level of detail provided for in the OCP around pit operations and use the Zoning Bylaw for that purpose instead;
- Creating a new bylaw designed to more broadly address the issue of soil removal and deposits, including those associated with site preparation and/or land development, modeled after British Columbia’s approach;
- Drafting general provisions in the next version of the Zoning Bylaw to more clearly address the issue of soil/gravel extraction (or fill) associated with site and development preparation and bolster the City’s ability to approve such undertakings, subject to terms and conditions;
- Regardless of regulatory vehicle (i.e., standalone or zoning bylaw), the requirement for security deposits or other monetary mechanisms to enhance the likelihood of developer compliance with originally submitted plans.

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# APPENDIX A

## Select Official Community Plan Excerpts

# BRITISH COLUMBIA

**Review List** - *City of Victoria, City of Colwood, City of Langford, District of Saanich, City of Nanaimo, Town of Lantzville, City of Kelowna, City of Vernon, City of Prince George, District of Squamish, City of Kamloops, Regional District Columbia Kootenay, Capital Regional District, Comox Regional District, Regional District of Central Okanagan, Regional District of South Okanagan*

## 1) Rural Comox Valley Regional District Official Community Plan (2018)

Economy and industry -policies (resource uses)

20.

(1) Encourage aggregate extraction and processing operators to incorporate best practices and design and carry out their operations in a manner that minimizes negative impact on surrounding land uses, the quality of life of residents and the natural environment of the CVRD.

Rural settlement areas – policies (industrial - resource activities)

51. (1) Existing resource activities are permitted.

(2) Support resource activities including timber harvesting and milling, aggregate extraction and processing and mineral extraction.

(3) Work with land owners to protect working landscapes when new resource activities are proposed and mitigate impacts with adjacent residential properties by encouraging buffering, setbacks and siting of operations.

Resource areas policies (resource and industrial)

64. (1) Permit removal and deposit of known deposits of sand, gravel and rock as shown on map 3 excluding areas identified as environmentally sensitive areas.

(2) Require rezoning of a property to an industrial category to permit processing of aggregates or minerals or require issuance of a temporary use permit.

(3) Consider adopting a soil removal and deposit bylaw under that prohibits deposits of materials that pose an environmental or health

Schedule A. (pg. 90 of 98) Gravel and sand crushing

(1) No portion of the lands included in the Kensington comprehensive development permit area is shown as on map 5, may be used for the crushing or processing of sand, gravel or other aggregate material, except as needed for the development of such lands.

(2) None of the above-mentioned material may be removed from the subject lands other than for use in the Kensington development permit area as shown on map 5 with the exception of removing excess material.

(3) Approval for the crushing or processing of sand, gravel, or other aggregate materials must be done in accordance to the provisions outlined in the Mines Act.

## 2) District of Squamish Official Community Plan (2017)

### 1.1 Objectives

- a. Protect and support access to a long-term supply of aggregate and mineral deposits within the District.
- b. Actively manage short and long-term impacts of aggregate extraction operations on the community and minimize adverse environmental impacts of extraction activities.

### 1.2 Policies

- a. Recognize sand and gravel deposits, including those identified on **Schedule I**, as important mineral resources essential for community building purposes. Extraction areas are designated *Intensive Industrial, Restricted Industrial, or Resource & Recreation* on **Schedule B**.
- b. Protect existing and future sand and gravel sources to preserve the ability to extract gravel from these limited sites in the future. Carefully consider the impacts of land use change proposals in proximity to sand and gravel deposits to minimize future incompatibilities.
- c. Recognize the importance of Lot 69 on the Cheekeye Fan, southwest of the Squamish Airport, as a long-term gravel extraction source for District infrastructure, while continuing to work to address forest industry land needs in Squamish.

- d. For aquatic deposits, monitor changes in riverbed elevations, using surveys of river cross sections and water surface profiles to confirm where/when gravel removal is required.
- e. Undertake dredging where necessary within navigable waterways (primarily Mamquam Blind Channel) within limits established for shoreline protection, and in consultation and partnership with regulating agencies and marine stakeholders, to ensure continued navigation access.
- f. Work cooperatively with the aggregate industry in managing existing gravel pit operations and minimizing land use conflicts related to noise, air quality and traffic impacts with proximity to adjacent residential and recreation areas, as well as impacts to environmentally or culturally sensitive sites and views.
- g. Evaluate applications for new or expanded gravel extraction activities based on potential operating impacts on adjacent residential or other land uses, and natural or culturally-sensitive areas. Also consider impacts on the local transportation network, and the District's community development objectives and long-term strategy for managing growth.
- h. Support continuous rehabilitation of gravel extraction sites and consider a variety of options for their future reclamation.

### **3) City of Prince George Official Community Plan (2011)**

#### **Rural Resource**

This designation includes areas used for agriculture, forestry, and resource extraction activities that are important in the long-term health of the regional economy. It also encompasses natural open spaces, environmentally sensitive areas, and natural hazard areas in which development is restricted or prohibited.

Policy 8.1.19 The City should restrict residential, Commercial and industrial (except resource extraction) growth in the rural resource area, as more fully described in the Land Use Section 8.3F of this bylaw.

Policy 8.1.20 The City should permit a minimum parcel size of 15 ha in Rural Resource areas.

#### **8.4 Aggregate Resources**

Aggregate (e.g., sand and gravel) is an essential resource for our community. Aggregate is primarily used as a raw material for the construction of roads, sidewalks, buildings and other structures that are made of concrete, and for snow and ice control. However, aggregates are also essential components for many industrial and utility processes.

The value of aggregate is low and the weight is high, therefore transportation costs become the main driver of consumer cost. This means economic supplies of aggregate should be located in close proximity to the consumers of the resource. Unfortunately, aggregate removal and deposit operations are often associated with negative impacts including:

- noise and vibration (i.e., equipment, processing, and blasting);
- traffic (i.e., busyness and road safety);
- air quality (i.e., dust, and other emissions related to asphalt and concrete manufacturing);
- drainage (i.e., erosion, sedimentation, flow regime change);
- water quality (i.e., groundwater risks);
- ecosystem impacts (i.e., habitat loss, fragmentation, introduction of invasive species); and
- aesthetics (i.e., loss of vegetation, disturbed landscapes, associated industrial activity).

The proximity of aggregate removal and deposit to urban areas often leads to conflict between aggregate businesses and local residents. Thus, aggregate removal and deposit needs to be regulated to mitigate the above-noted impacts, while aggregate resources require protection from sterilization due to encroachment by incompatible land uses and activities.

Prince George was built over a thick layer of sand, gravel, silt and glacial till which were deposited by melt waters from the last Ice Age. Plentiful aggregate in close proximity to the City has helped with the development and maintenance of our community's buildings and infrastructure. However, urban uses have expanded over and in close proximity to many of our key aggregate sources, while existing pits continue to be depleted.

Map 2 - Aggregate Potential indicates areas of primary, secondary, or tertiary potential for aggregate resources for reference purposes. It provides guidelines for testing, evaluating and managing aggregate resources within Prince George. This map provides approximation estimates of broad, regional aggregate distribution based on soil and landform units within



the Prince George area. The potential was assessed by compiling data pertaining to landform type, soil type, area, presence of pits, overburden thickness, gravel thickness and volume. Each factor was subdivided into several classes and ranked. The rankings were used to eliminate unfavourable areas, and to subdivide the remainder into areas of primary, secondary or tertiary significance. (P.T. Bobrowsky, P.Geo, N.W.D. Massey, P.Geo., and A. Matheson, P.Geo. (1996); Aggregate Resource Potential of the Prince George Area, B.C. Ministry of Employment and Investment, Open File 1996-24).

#### Objectives

Objective 8.4.1 Encourage responsible aggregate removal and deposit.

Objective 8.4.2 Ensure an affordable and sustainable aggregate supply by protecting existing aggregate removal operations and areas of primary aggregate potential from encroachment by incompatible land uses.

Objective 8.4.3 Actively encourage progressive reclamation of closed, abandoned and depleted aggregate removal or deposit sites or portions thereof.

Objective 8.4.4 Continue to improve our knowledge of aggregate resources by updating inventories of aggregate quantity, quality, operational status, and location.

Objective 8.4.5 Work toward a coordinated approach to aggregate removal and deposit regulation and permitting.

Objective 8.4.6 Work collaboratively with the Province, residents, and the aggregate industry to manage aggregate resources in the long term.

#### Designation of Areas

##### Aggregate Resource Areas

Schedule B-7: Aggregate Resources indicates the approximate location and area of aggregate deposits that are suitable for removal. The areas indicated are intended to provide clear direction for private developers, local residents, and Provincial & local governments regarding planning and development of aggregate resources in Prince George. This schedule also includes the Aggregate reserves held by the Ministry of Transportation and Infrastructure.

#### Policies

##### General

Policy 8.4.1 Aggregate removal and deposit should only occur in accordance with the provisions of the Soil Removal and Deposit Bylaw including terms and conditions respecting:

- Hours of operation;
- Processing; Stockpiling;
- Traffic and Access;
- Stormwater and erosion control;
- Aquifer protection;
- By-product and waste management;
- Setbacks from residential uses;
- Screening Phasing;
- Co-location of aggregate extraction with aggregate processing and manufacturing; and
- Site layout to mitigate impacts such as noise, dust and visual quality.

Policy 8.4.2 Future urban land uses should not be permitted on lands indicated on the Map 2 - Aggregate Potential as having primary potential for aggregate resources, until the subject lands have been depleted of their aggregate resources provided that the finished topography continues to facilitate cost effective urban development.

Policy 8.4.3 Future urban land uses should be setback a minimum of 500 m from lands shown in green on the Aggregate Resources Map.

Policy 8.4.4 Future aggregate removal and deposit should be prohibited from lands shown in red on the Schedule B-7: Aggregate Resources because aggregate operations are considered incompatible within:

- 1) 500 m of existing and future urban land uses,
- 2) groundwater protection areas,
- 3) environmentally sensitive areas,
- 4) parks, and
- 5) heritage conservation areas, except:

aggregate removal or deposit allowed without a permit or short term permit under the Soil Removal and Deposit Bylaw, and, aggregate removal or deposit allowed with a short term permit issued under the Soil Removal and Deposit Bylaw within the future urban settlement area.

Policy 8.4.5 Future aggregate removal and deposit should be restricted on lands shown in yellow on the Schedule B-7: Aggregate Resources because aggregate operations are generally considered inappropriate, except:

- aggregate removal or deposit allowed without a permit under the Soil Removal and Deposit Bylaw;
- where an aggregate removal or deposit impact assessment has been provided to the City demonstrating that the impacts can be practically alleviated and until adequate mitigation measures are in place, and,
- aggregate removal or deposit allowed with a permit or short term permit issued under the Soil Removal and Deposit Bylaw within a future urban settlement area.

Policy 8.4.6 Future aggregate removal and deposit may be permitted on the lands shown in green on the Schedule B-7: Aggregate Resources with a permit or short term permit issued under the Soil Removal and Deposit Bylaw.

Policy 8.4.7 For clarity, the policies of this section regarding “future” aggregate removal and deposit operations do not apply to aggregate removal and deposit operations that are operating in accordance with the Soil Removal and Deposit Bylaw at the time of this bylaw’s adoption. These existing aggregate removal and deposit operations may continue in accordance with the Soil Removal and Deposit Bylaw. However, any expansion to these existing aggregate removal or deposit operations should be in accordance with the “future” aggregate removal and deposit policies of this Plan.

Policy 8.4.8 Once reclaimed, the aggregate resource sites may be used for the purposes defined by Schedule B-6: Future Land Use.

Policy 8.4.9 Public consultation shall be part of any review of soil removal or deposit designation under the Soil Removal and Deposit Bylaw.

## ALBERTA

*Review list – Red Deer, St. Albert, Edmonton, Calgary*

### 4) Red Deer Municipal Development Plan (2012)

#### 6.3 Resource Extraction

##### 6.3.1 Limitations on Resource Extraction

New resource extraction development proposals within County jurisdiction shall not be allowed:

- a. in close proximity to Hamlets or urban municipalities; and
- b. in areas which are known to possess unique historical and/or environmental features that would be disturbed or destroyed by resource extraction. In addition, support for resource extraction operations shall be contingent on the mitigation or minimization of the cumulative adverse impacts upon adjacent land uses, soil, water, and farming operations.

##### 6.3.2 Resource Extraction Industry Cooperation

A proactive approach shall be applied by the County to encourage the resource extraction industry, in advance of exploration and extraction activities, to review the cumulative impacts of such activities on existing and future land uses, and Important Water-Related Features. The industry should also work with the County in determining appropriate setback distances from existing residences and livestock operations, preparing reclamation and end use plans, and in educating the public.

##### 6.3.3 Separation from Natural Resource Extraction Activities

New subdivision and development, particularly residential, may be directed away from active and potential non-renewable surface resource extraction areas to minimize the potential for conflict between incompatible land uses. For information on the location of existing and potential aggregate resources, refer to the Gravel and Sand Deposits and Extraction Map in Appendix A.

##### 6.3.4 Gravel Extraction Permits

The permitting and licensing process for sand and gravel operations will be coordinated between Red Deer County and Alberta Environment.

##### 6.3.5 Site Reclamation

The development of sand and gravel extraction operations is subject to reclamation in accordance with the Code of Practice for Pits as set out by Alberta Environment.

## 5) Calgary Municipal Development Plan (2009)

### 4.2 Protection of sand and gravel resources

- a. Protect existing and future aggregate sources from premature use for urban development and ensure appropriate mitigation measures to protect and facilitate aggregate extraction.
- b. Allow the continuation of existing sand and gravel extraction operations in accordance with the conditions of the necessary permits.
- c. Support the recycling of concrete, pavement and stone in locations that minimize nuisance impacts of dust, noise, odours and truck traffic on surrounding urban development.
- d. Routes for truck access and egress to the site should be identified and located to minimize nuisance impacts.

## 5) Edmonton Municipal Development Plan (2010)

### 9.1 Natural Resource Extraction

9.1.1 Mitigate the negative impacts of resource extraction activities to protect people and the natural environment.

Policies:

9.1.1.1 Subject to Federal and Provincial overriding approvals, resource extraction is prohibited within the North Saskatchewan River Valley and Ravine System in order to preserve its ecological value except where resource material is required to be removed to the extent necessary to accommodate an approved development.

9.1.1.2 Protect, for future use, significant deposits of natural resources such as sand and gravel, and promote appropriate rehabilitation and reclamation after extraction.

9.1.1.3 Use setbacks and other land use measures to mitigate any risk or nuisance factors associated with the retrieval of resources.

9.1.1.4 Develop a mechanism to address the issue of timing of development approvals related to active resources extractions which may include oil and gas, sand and gravel.

9.1.1.5 Collaborate with the Government of Alberta to plan for compatibility with adjacent land uses so that negative impacts from resource extraction are minimized.

## **SASKATCHEWAN, MANITOBA AND NORTHWEST TERRITORIES**

*Review list - Grande Prairie, White City, Saskatoon, Regina, Moose Jaw OCP, Brandon, Steinbach, Churchill Yellowknife, Inuvik, Fort Smith*

## **ONTARIO**

*Review list – Milton, London, Hamilton, Township of King, Orillia, Ottawa, Guelph, Kenora*

### Orillia Official Plan (2010)

#### 4.6 AGGREGATE RESOURCES OVERLAY

a) Lands identified within the Aggregate Resources Overlay on

Schedule 'C' have been identified as having potential for mineral extraction. Notwithstanding the land use designations on Schedule 'A', where deemed appropriate by the Province, Council's consideration of new public works and/or private development proposals within these areas shall be preceded by a geological assessment of a proposed development site's mineral aggregate resources to establish the precise quality, quantity and extent of any mineral deposits. Where geological investigation reveals a high potential for mineral aggregate extraction, the identified resource is permitted for aggregate extraction and shall be removed prior to the occurrence of development, without the need for an Amendment to Schedule 'A' of this Official Plan, subject to Provincial licensing of the aggregate operation.

b) Proposed development and site alteration in the vicinity of mineral aggregate operations shall not be permitted unless it is demonstrated through an Aggregate Potential Assessment/Compatibility Study that the proposed use will not preclude or hinder the aggregate operations existing use, expansion or be incompatible for reasons of public health, public safety or environmental impact. Mineral aggregate operations in the City are shown on Schedule 'C'. Schedule 'C' also identifies aggregate resources in the City and proposed development within, or adjacent to this area shall not be permitted unless it is demonstrated that:

i) resource use would not be feasible; or

ii) the proposed land use or development serves a greater long-term public interest; and,

iii) issues of public health, public safety and environmental impact area addressed.

c) If the mineral aggregate potential of an identified site has been exhausted, or shown to be insignificant, development may proceed in accordance with the land use designations delineated on Schedule 'A'.

d) Mineral aggregate extraction may, subject to the approval of the Province, be undertaken as a component of the general development process, whereby the aggregate is predominantly utilized in the construction of onsite services and/or is provided to the municipality for similar use in other parts of the City.

e) The following policies shall apply in the differing circumstances:

i) Wayside Pits and Quarries and Portable Asphalt Plants - The City recognizes the need for wayside pits and quarries and temporary, portable asphalt plants to provide sand, gravel and other mineral aggregates for road construction and maintenance and other municipal projects. As such, it is a policy of this Official Plan to permit wayside pits and quarries to locate in all land use designations delineated on Schedule A, with the exception of the 'Environmental Protection Area' designation, without the need for an amendment to this Official Plan and/or Zoning By-law. Temporary, portable asphalt plants may be permitted in the 'Employment Lands' designation on lands affected by the Aggregate Resources overlay on Schedule 'C'.

ii) General Development:

- the establishment of a new commercial Pit or Quarry and/or the expansion of an existing pit or quarry shall require an amendment to this Official Plan and to the Zoning By-law.

- where mineral aggregates are to be extracted, as part of the development process for the same site, such extraction shall be permitted without the need for an amendment to this Official Plan and/or Zoning By-law.

- the uses permitted shall be limited to the preparation of a site for mineral aggregate extraction, the extraction and storage of mineral aggregates and the rehabilitation of a site after mineral aggregate extraction or as extraction progressively occurs. In addition, ancillary uses to mineral aggregate extraction such as very limited screening and washing may be permitted.

iii) Development Criteria - Applications to amend the Zoning By-law to permit a new commercial pit or quarry or the expansion of an existing commercial pit or quarry shall be accompanied by the following:

- a site plan prepared in accordance with the provisions of the Aggregate Resources Act and Ontario Regulations as may be amended from time to time;

- a report prepared by a geologist indicating the estimated or approximate pattern, quality and quantity of the resource;

- a transportation report which shall indicate the anticipated number of truck movements, anticipated truck routes and the daily time period during which trucks will be travelling on local roads;

- reports prepared by a professional engineer, biologist or other qualified professional indicating the impact of the proposed operation on the environment, including air and water pollution, noise, changes in the water table, changes in surface drainage both on and off the site and the effectiveness of the proposed ameliorative measures; and

- where necessary, a Certificate of Approval from the Province in accordance with Section 8 of the Environmental Protection Act.

iv) Implementation - Pits and quarries shall be zoned in a separate category in the implementing Zoning By-law.

### **Township of King Official Plan (2019)**

#### **6.7 MINERAL AGGREGATE RESOURCES**

The Countryside contains known deposits of mineral aggregate and petroleum resources and existing mineral aggregate operations. These resources are shown on Schedule L of this Plan as selected sand and gravel resource areas of primary and secondary significance. The boundaries of these areas are considered to be approximate.

It is the objective of the Township to:

1. Ensure that as much of the mineral aggregate resources as is realistically possible is made available as close to market as possible.
2. Recognize existing mineral aggregate operations and protect them from activities that would preclude or hinder their

continued use or expansion.

3. Implement the policies of this Plan in a manner that ensures that these policies are not in conflict with the applicable Provincial plans.
4. Protect known deposits of mineral aggregate and petroleum resources for potential future extraction.
5. Ensure that new mineral aggregate operations will not have a negative impact on significant natural heritage features and related ecological functions.
6. Ensure that the haul routes used are appropriate.
7. Ensure that extraction is carried out in a manner that minimizes social, economic and environmental impacts.
8. Encourage mineral aggregate resource conservation, including through the use of accessory aggregate recycling facilities within operations, wherever feasible.
9. Ensure that final and progressive rehabilitation occurs to accommodate subsequent land uses, to promote land use compatibility, to recognize the interim nature of extraction, and to mitigate negative impacts to the extent possible.

#### 6.7.2 POLICIES FOR NEW AND EXISTING AGGREGATE OPERATIONS

It is the policy of Council:

1. That demonstration of the need for mineral aggregate resources, including any type of supply/demand analysis, shall not be required, notwithstanding the availability, designation or licensing for extraction of mineral aggregate resources locally or elsewhere.
2. That mineral aggregate operations shall be protected from development and activities that would preclude or hinder their expansion or continued use or which would be incompatible for reasons of public health, public safety or environmental impact.
3. That existing mineral aggregate operations shall be permitted to continue without the need for official plan amendment, rezoning or development permit under the *Planning Act*. When a license for extraction or operation ceases to exist, the policies of this section continue to apply as applicable.
4. That, when new development requiring a *Planning Act* approval is proposed within 300 metres of a pit (or 150 metres if the floor of the pit is above the water table) or 500 metres of a quarry, the approval authority shall be satisfied that the proposed use is compatible with the current and future operation of the pit or quarry. In some cases, setbacks between the uses may be required to minimize conflicts. In order to determine if a new use is compatible, the development proponent will be required to demonstrate that the proposed use shall provide for the necessary mitigation of impacts arising from the existing pit or quarry, including future phases that are under license but are yet to be extracted, to meet applicable Provincial standards, regulations and guidelines.
5. That, in areas of known deposits of mineral aggregate resources or on adjacent lands, as shown on Schedule L, development and activities which would preclude or hinder the establishment of new operations or access to the resources shall only be permitted if:
  - a. Resource use would not be feasible;
  - b. The proposed land use or development serves a greater long-term public interest; and,
  - c. Issues of public health, public safety and environmental impact are addressed.

#### 6.7.3 POLICIES FOR NEW AGGREGATE OPERATIONS

It is the policy of Council:

1. That any application shall be supported by studies that are based on predictable, measurable, objective effects on people and the environment. Such studies will be based on Provincial standards, regulations and guidelines, where they exist and will consider and identify methods of addressing the anticipated impacts in the area affected by the mineral aggregate operation.
2. That an application for a new aggregate operation or wayside pit shall address:
  - a. Impacts on the natural heritage features and ecological functions on the site;
  - b. How the connectivity between key natural heritage features and key hydrologic features will be maintained before, during and after the extraction of mineral aggregates;
  - c. How the operator could replace key natural heritage features and key hydrologic features that would be lost from the site with equivalent features on another part of the site or on adjacent lands;
  - d. Impacts to nearby communities;
  - e. Impacts to agricultural resources and activities;
  - f. The quality and quantity of groundwater and surface water;
  - g. The cultural heritage resources in the area;
  - h. The groundwater recharge and discharge functions on the site and in the immediate area;
  - i. Nearby wells used for drinking water purposes;
  - j. Within the Agricultural Area (prime agricultural areas), impacts to agricultural uses will be evaluated, including the requirement that an agricultural impact assessment be completed. Further, where possible, the agricultural

- impact assessment will seek opportunities to maintain or improve connectivity of the Agricultural System;
- k. Conformity with applicable Provincial policy.
3. That an application for a new aggregate operation shall address the effect of the additional truck traffic on the ability of an existing haul route to function as a safe and efficient haul route considering:
    - a. The types of operations proposed;
    - b. Current road standards and an assessment of the proposed haul route relative to those standards;
    - c. Anticipated type of truck traffic; and
    - d. Increases in background traffic levels together with current levels of truck traffic and other traffic.
  4. To encourage the establishment of new mineral aggregate operations on established haul routes. If a new haul route is proposed, it shall only be approved if it has been demonstrated that:
    - a. The new haul route is, or can be made, safe and capable of handling the volume of traffic proposed.
    - b. The selection and design of the proposed haul route has taken into consideration and addressed impacts on existing and permitted sensitive land uses along the proposed haul route.
    - c. The design of the new haul route has taken into consideration the existing road right-of-way characteristics including existing trees and vegetation within the road right-of-way, wood, wire, stump and stone fence lines within or adjacent to the right-of-way or other historical landscape remnants and where practical has identified means by which such features will be retained in order to minimize the impacts on the character of the area.
    - d. The design of the new haul route has taken into consideration the physical characteristics of the potential route including road classification, load limits, road surfacing and the identification of any physical constraints to heavy truck traffic, such as vertical or horizontal curves, sight lines or shoulders and the means to address any deficiencies.
    - e. The design of the haul route has taken into consideration the traffic impacts (both operational and physical) resulting from the truck traffic generated by the proposed operation, including impacts on road structure, traffic flow and safety and the mitigation measures that will be employed to address these impacts.
    - f. That an application for a new aggregate operation shall address the impact of the noise, odour, dust and vibration generated by the proposed use on adjacent land uses.
    - g. That an application for a new aggregate operation shall address how the impacts from the proposed mineral aggregate operation on adjacent uses will be mitigated in order to lessen those impacts.
    - h. That an application for a new aggregate operation shall address how the site will be progressively rehabilitated to accommodate subsequent land uses after the extraction is completed.

### City of Ottawa Official Plan (2003)

#### WAYSIDE PITS AND QUARRIES

14. Wayside pits and quarries, portable asphalt plants and temporary portable concrete batching plants used on public authority contracts are permitted in all land-use designations except Natural Environment Areas, Urban Natural Features, Significant Wetlands, and in areas abutting the Ottawa and Rideau Rivers and in areas of existing development. A permit for a wayside pit or quarry is granted subject to the provisions of the *Aggregate Resources Act* and as such, the public consultation process and the rehabilitation of the site must be carried out in conformity with the Act. [Amendment #76, August 04, 2010] [Amendment #150 December 21, 2017]

#### 3.7.4 – MINERAL AGGREGATE RESOURCES

The major mineral aggregate resources in Ottawa are bedrock, sand and gravel. Aggregate resources are used to build and repair houses, schools, shopping centres, factories, roads, sewers, and water pipes. They may be used in a relatively natural state for fill or as a road base, or they may be processed into materials for the construction industry, such as concrete, asphalt, or brick. In addition, aggregates can be recovered during demolition, processed and recycled into new aggregate products such as asphalt or concrete. In many cases these recycled aggregate products offer a suitable alternative to primary aggregates while also reducing the need for new aggregates. [Amendment #150, December 21, 2017]

Mineral aggregates are a non-renewable resource that the City will steward for future generations. Lands designated as Sand and Gravel Resource Area or Bedrock Resource Area have deposits of aggregates that may be available because they are:

- Of a good quality and quantity;
- Located sufficiently close to local markets;
- Situated in relation to existing residential development such that they can be extracted with minimal impacts on most residential land uses.

Since hauling costs are a significant component of the final price of aggregates, protecting resources close to local markets helps to ensure the availability of mineral aggregate products at lower prices. Keeping hauling distances short will also minimize the environmental and community impacts of this traffic. Care must be taken to ensure that the environmental and social impact of mineral resource extraction is minimized. To this end, extractive operations must maintain good operating standards as well as have a viable rehabilitation plan. [Amendment #150, April 20, 2018]

Existing licensed extraction sites make up much of the supply of aggregate. The City will protect their continued operation and expansion by preventing any new development in their vicinity that would preclude or hinder aggregate extraction.

In Ottawa, sand and gravel pits are generally smaller-scale and shorter-term operations than bedrock quarries. They do not involve drilling, blasting or rock crushing and therefore pits may not need to be as widely separated from incompatible uses as quarries. Sand and gravel pits are permitted in the Sand and Gravel Resource, the Bedrock Resource, the General Rural Area. [Amendment #150, December 21, 2017] [Amendment #180, November 8, 2017]

### **Policies**

1. Sand and Gravel and Bedrock Resource Areas are designated on Schedules A and B with the intent to:
  1. Protect non-renewable mineral aggregate resources, located close to markets, for future use;
  2. Protect mineral aggregate resource and aggregate operations from incompatible activities;
  3. Minimize negative effects on communities and the environmental disruptions from mineral aggregate extraction activities and additional related uses.

There is no implied restriction to applications for mineral aggregate operations outside of the areas defined as Sand and Gravel Resource Area or Bedrock Resource Area. [Amendment #150 April 20, 2018]

2. Although an adequate supply of mineral aggregate resources has been identified in the Plan, Council recognizes that the City's growth rate may result in pressures to identify and protect additional areas of mineral aggregate potential, including sand and gravel resources. As such, Council will commit to establishing a stakeholder consultation group comprised jointly of industry and community representatives to assist in identifying resource areas throughout the municipality to ensure their protection for long-term use. It is Council's intent that mineral aggregate resource areas will be reviewed and updated in advance of the next comprehensive review of this Plan. [Amendment #150, April 20, 2018]

### **PERMITTED USES IN SAND AND GRAVEL RESOURCE AREA**

3. The City will permit the operation of sand and gravel pits as the main land uses for those lands identified as Sand and Gravel Resource Areas subject to the provisions of the *Aggregate Resources Act*. Additional related uses such as asphalt plants, concrete batching plants and other uses associated with sand and gravel extraction operations may also be permitted. Existing or new farming, forestry, small-scale open-air recreational uses and conservation and natural resource management activities are permitted provided they do not create difficulties for the future extraction of mineral aggregates from any lands in the designation. Temporary non-residential uses may be permitted if they can be demonstrated not to preclude or otherwise hinder the site for future mineral aggregate extraction. All of these non-aggregate related uses will only be permitted if any issues of public health, public safety and environmental impact are addressed to the City's satisfaction. [Amendment #150, April 20, 2018]
4. In recognition of existing lots of record, the City will permit the construction of a detached dwelling and accessory buildings subject to the following conditions:
  1. The lot fronts on a public road;
  2. The lot was created under the *Planning Act* prior to July 9, 1997;
  3. The use is shown as permitted in the zoning by-law;
  4. All requirements for private servicing requirements are met;

5. New development will be sited on existing lots in order to minimize the impact upon future extraction of mineral aggregate resources.

## ZONING OF PITS AND QUARRIES

7. The City requires that all pits and quarries licensed under the *Aggregate Resources Act* with the exception of wayside pits and wayside quarries be zoned for mineral extractive use in the City's zoning by-law. This applies whether the pit or quarry is located in a Sand and Gravel Resource, Bedrock Resource, Agricultural Resource, General Rural or other designation. All or part of properties with a licensed pit or quarry may also be zoned for aggregate-related uses, such as asphalt and concrete batching plants. As stated in Section 3.1, wayside extraction of aggregates, portable asphalt plants and temporary concrete batching plants used on public authority contracts will however be permitted without the need for a rezoning. Wayside pits and quarries will be subject to the *Aggregate Resources Act* and as such the public consultation process and the rehabilitation of the site must be carried out in conformity with the provisions of that Act. [Amendment #150, December 21, 2017]
8. The City will require that all lands in the Sand and Gravel Resource or Bedrock Resource Areas not presently licensed for a pit or quarry be zoned in the City's zoning by-law so that it is clear that extraction of mineral aggregate use may occur on these lands. Prior to the establishment of any new pit or quarry, the City will require that the lands be rezoned to specifically permit the mineral aggregate extraction use and other related uses. The rezoning requirement and policy 8 below apply to wholly new proposed pits or quarries or proposed expansions to existing ones. In certain circumstances, there may exist lands already zoned and licensed for a pit or quarry but none is yet in operation or not in operation on all portions of a property. [Amendment #150, December 21, 2017]

## ESTABLISHING OR EXPANDING PITS OR QUARRIES

9. As part of a complete application, studies and the site plans required under the *Aggregate Resources Act* will also be required by the City. The areas of influence generally are 500 metres around quarries, 150 metres for pits above the water table and 300 metres for pits below the water table and the proposed haul route. The required studies, as are determined to be appropriate considering the type of extraction proposed, may include those identified in the *Aggregate Resources Act* and will be defined in a pre-consultation process. Studies may include those described elsewhere in this Plan as well as, but are not necessarily limited to additional information on: [Ministerial Modification 25, November 10, 2003]
  1. Anticipated noise, dust and vibration levels that illustrate that the Ministry of Environment guidelines and criteria will be satisfied;
  2. Rationale for proposed haul routes, expected traffic volumes and entrance/exit design to show that the road system can safely and efficiently accommodate the proposed truck traffic. This may include provision for upgrading of local City roadways leading to an arterial road and on-going maintenance requirements along such route so long as the pit or quarry is in operation;
  3. Impact on neighbours from noise, dust, vibration, truck traffic, etc., due to the duration of the extraction operation in hours per day and number of days per week;
  4. The elevation of the groundwater table on and surrounding the site;
  5. Any proposed water diversion, water taking, storage and drainage facilities on the site and points of discharge to surface waters. An impact assessment will address the potential effects on the following features on or adjacent to the site, where applicable:
    1. Water wells,
    2. Springs,
    3. Groundwater,
    4. Surface watercourses and bodies;
    5. Wetlands, woodlands, and fish and wildlife habitat;
    6. Water balance;
    7. The cumulative effects of two or more bedrock quarries with 1 km of each other.
  6. Adjacent and nearby land uses and an assessment of the compatibility of the proposed development with existing land uses. This includes possible completion of an Environmental Impact Statement as referenced in Section 4.7.8;



7. If within an Agricultural Resource Area on Schedule A, the agricultural classification of the proposed site and the proposed agricultural rehabilitation techniques if the site is Class 1, 2 or 3 soils and extraction is not below the water table;
8. The proposed after-use and rehabilitation plan;
9. Mitigation measures that may be necessary to address the potential impacts of the operation. [Amendment #150, December 21, 2017]

#### DEVELOPMENT RESTRICTION ON ADJACENT LANDS

10. New development will not be approved within 500 metres of a Bedrock Resource Area or within 300 metres of a Sand and Gravel Resource Area, unless it can be demonstrated that such development will not conflict with future mineral aggregate extraction. Examples of conflicting land uses are new sensitive land uses that conflict with mineral aggregate extraction. These include but are not necessarily limited to:
  1. the creation of new lots;
  2. rezoning to permit dwellings or lodging places (motels, camp grounds, nursing homes, etc.); and
  3. farming or small-scale business uses where animals, equipment or employees are affected by pit or quarry activities. [Amendment #150 April 20, 2018]
11. New development may be approved within 500 metres of an existing licensed bedrock quarry or within 300 metres of an existing sand and gravel pit if it can be demonstrated that the existing mineral aggregate operation, and potential future expansion of the operation in depth or extent, will not be affected by the development. [Amendment #150 December 21, 2017]
12. The Ministry of Natural Resources will be consulted in review of studies necessary.
13. Where the City approves the development of land in accordance with policies above, the City may impose conditions to ensure the development provides adequate buffering and/or separation between the new proposed use and the mineral aggregate area/operation. [Amendment #150, December 21, 2017]

## NEW BRUNSWICK

### Review list - *Town of Riverview, Moncton, Fredericton, St. John*

#### City of Moncton Municipal Plan (ND)

##### Objectives

##### SECTION 3.4: Shaping Our Built Environment

##### Resource Designation

1. Protect all areas defined as being capable of supporting high quality aggregate extraction as well as industrial mineral production and to consider for protection areas of valuable quarry mineral potential.
2. Ensure that there are proper processes in place to protect the public and mechanisms to rehabilitate quarries and pits once the re-source has been depleted.
3. Ensure that aggregate materials continue to be available to support local and regional construction projects at reasonable cost through the efficient use and protection of these re-sources.
4. Incorporate into the borrow pit and quarry mineral extraction operations, programs to rehabilitate the extraction site to a state that is environmentally safe, stable and compatible with the adjacent landscape and not in conflict with them.
5. Minimize potential land use conflicts between mining activity and other adjacent uses.
6. Encourage the Province of New Brunswick to recognize quarries as a similar use of land to open pit mining and establish strict regulations related to quarry development, extractive methodology, processing and public safety, as well as all environmental impacts of quarries upon such land and nearby land uses.

##### Resource Designation

The following are policies of Council:

RE-1 A Resource designation shall be established on that portion of the Lutes Mountain rock formation which is being used for construction aggregate. Furthermore, The City shall encourage the Province of New Brunswick to consider measures for protection of that portion of the area which lies within the unincorporated area and in the Gayton Pit area.

RE-2 Within the Resource designation, Council shall establish a resource zone within which resource processing and related industrial uses shall be permitted.

RE-3 Areas with high quality aggregate deposits suitable for future extraction and areas identified as capable of producing valuable quarry minerals shall be restricted in their use. The uses that shall be permitted are those that will provide access to the resource until such time that it has been exhausted and the site rehabilitated, or the aggregate resource is determined to be forever uneconomical to extract.

RE-4 Within the RR-2 (Rural Resource) Zone, the development of quarry and borrow pits shall be subject to terms and conditions. Consideration shall be given to, but not limited to the following criteria:

- a) separation from existing developments;
- b) prohibition of related truck traffic on local streets;
- c) hours of operation;
- d) measures for control of dust and protection of the environment and of groundwater;
- e) plans for phasing of the pit's development and its rehabilitation to a useable state in conformity with the existing zone;
- f) provision of negotiable security adequate to ensure rehabilitation of the site;
- g) provision for monitoring the site with respect to the effects on the environment, ground water and any remedial measures to be taken when deemed necessary by the New Brunswick Department of Environment including temporary or permanent discontinuance of the use; and
- h) public safety.

### **City of Saint John Municipal Plan (2014)**

#### **2.4 Rural Resource Area**

The majority of the lands within the City's Rural Areas are located in the Rural Resource Area designation. These lands are intended to facilitate resource related activities, where appropriate, such as forestry operations, agriculture, fisheries, and extraction activities, including pits and quarries. Limited residential and other land uses may be contemplated.

Council shall:

Policy LU-95 Create the Rural Resource Area designation on the Future Land Use map (Schedule B). Council intends that land within the Rural Resource Area designation shall generally remain in their natural state, or, subject to regulation and required approvals, be used for appropriate resource uses including forestry operations, agriculture uses including livestock operations and the fishery, and extraction activities, including pits and quarries.

Policy LU-96 Provide that pits and quarries may be located in the Rural Resource Area designation provided the land is rezoned to the Pits and Quarries Zone. The Pits and Quarries Zone defines the specific performance standards for their operation, and the rehabilitation of operative and inoperative pits and quarries. In considering applications to rezone a property to the Pits and Quarries Zone, Council shall ensure the proposed use can demonstrate compliance with all of the zone provisions, including:

- a. Compatibility with and/or minimal impact on existing adjacent land uses;
- b. An appropriate location and acceptable hours of operation;
- c. A stormwater management plan;
- d. Incorporation of site development measures which will assist in the control of smoke, dust, odour, toxic materials, vibration and noise;
- e. Compliance with required setback, yard, and separation distances from existing roads or uses;
- f. The provision of visual screening;
- g. Acceptable location for buildings and equipment;
- h. Inclusion of necessary safety and protective measures;
- i. Acceptable location of entrances and exits, and the designation of acceptable hauling routes;
- j. Demonstrated compliance with signage and landscaping provisions; and
- k. Measures to ensure future rehabilitation of the site.

Policy LU-97 Consider permitting limited residential development in the Rural Resource designation. Residential development shall only be permitted on newly created lots that have a minimum lot area of four (4) hectares (40,000 square metres) and have direct access to an existing public or private street.

Policy LU-98 Consider permitting new residential development in Rural Resource areas provided that it demonstrates compatibility with existing resources related uses.

Policy LU-99 Generally not accept the dedication of new public streets within the Rural Resource Area designation unless Council determines that the new roadway is necessary to provide safe access to the development or is necessary to improve connectivity between developments in the general area.

Policy LU-100 Consider requests to re-designate lands from Park and Natural Area to Rural Resource Area provided that the land does not contain environmentally significant features, a demonstrated potential exists for a resource-related use of the land, and any environmental and/or community quality of life impacts from the proposal can be mitigated to a level deemed acceptable by Council

## **NOVA SCOTIA AND PRINCE EDWARD ISLAND**

*Review list – Truro, Yarmouth, Lunenburg, Summerside, Charlottetown, Town of Port Hawkesbury*

## **NEWFOUNDLAND & LABRADOR**

*Review list – Cornerbrook, Gander, St. John’s, Cow Head, Grand Bank*

*City of Cornerbrook Integrated Municipal Sustainability Plan (2012)*

### **4.1 MINERAL WORKINGS**

#### **4.1.1 Context**

Some of the most extreme alterations to the natural environment occur in the search for, and eventual extraction and processing of mineral resources. The development of mineral workings is an important asset to the City’s economy and development as it provides a readily available, easily accessible and thus less expensive supply of raw material necessary for the construction of roads and the manufacture of asphalt and other building materials. This may also enable major construction and road projects to be carried out more expeditiously. It is important that mineral workings within the City be closely monitored by the Province, as well as the City itself, to ensure that proper safety, environmental and municipal regulations are strictly adhered to. This will enable the quarries to function efficiently and satisfy public interest that operations are being carried out with regard to citizen’s concerns and environmental integrity.

It is important that the existing quarries within the municipal planning area (both in the Mineral Working and Rural Zones) are being operated efficiently. It is anticipated that the existing longer term quarry operations are sufficient for the period of the Plan; however, new quarry sites or mineral workings may become necessary and may be considered for approval. As well, to ensure that these quarries do not become heavy industrial areas, development permits issued for specific projects shall be issued with a specified or temporary operating period.

The following policies will guide and shape the development of mineral working areas thus protecting the natural environment and general public from any adverse impact.

#### **4.1.1.2 Objective**

To guide and shape the development of mineral workings in such a way that adverse impacts to the natural landscape, physical environment and citizens of Corner Brook are minimized.

#### **4.1.1.3 Policies**

01. All mineral workings within the Municipal Planning Area shall be conducted so that no nuisance or danger is caused to the general public and the scenic amenity of the surrounding area is preserved. In order to preserve the scenic beauty and amenity of the area, operations will generally, wherever possible, be restricted to areas not exposed to public view. In this regard, conceptual drawing or computer modeling of the quarry or mineral working site may be required to identify any potential visual impacts of the use.

02. No mineral working operations will be permitted to cause the pollution of any watercourse.

03. Developers of mineral workings will be required to provide adequate buffering, setbacks, fencing, erosion, and sedimentation control, site maintenance, and proper ingress and egress to ensure a safe and aesthetically acceptable operation.
04. New mineral working operations in Rural Areas may be permitted at the discretion of the Authority. If the operation is deemed appropriate, the Authority shall impose conditions to ensure that provisions are made for rehabilitation and environmental protection. Applications for mineral workings will require a Land Use Assessment Report and rehabilitation plan to be submitted with the application.
05. Existing or new mineral workings that are located in a Rural land use designation may require a municipal plan amendment to re-designate to a Mineral Working land use if the operation is of a significant size in terms of land area or scale of the operation, or if the use is expected to be in operation for a number of years.
06. When issuing a development permit for any mineral working area, the Authority may attach such other conditions as are, in its opinion, necessary to properly regulate the operation.
07. Upon completion of mineral working and quarrying operations, and where there is no intention to re-open such operations, all buildings and machinery will be required to be removed. The site shall be rehabilitated so as not to constitute a danger to the public or present an unsightly appearance and shall be left in a state so that it may be used for a compatible land use in the future.
08. Limits of the present mineral working designation in the Riverside Drive areas will not be permitted to expand beyond the limits as shown on Map C.
09. Mineral exploration activities shall be considered as mineral workings where there is surface ground disturbance to the landscape and may be subject to the same application process and rehabilitation procedures as other mineral working operations.
10. The Authority shall be satisfied that mineral working operations are carried out in a manner with regard to public safety including restricting access to the public, installation of safety fences, stabilization of unstable slopes, etc. The Authority may also request an inspection of mineral working sites to ensure compliance with any safety requirements.
11. Mineral exploration requiring a development permit shall also adhere to the development permit process of the Province. This will be in addition to or complementary to any other conditions and/or requirements of the Authority and the above policies.
12. Where practically possible, quarries and mineral working uses will be screened from major highways, arterial roads, residential areas or other urban development sites by natural or other vegetation. Where this is not practical or possible due to the distance between the mineral working use and the road or other development, the Authority will require immediate remediation of that portion of the mineral working site upon completion of activity in that area

## APPENDIX B

### Prince George Soil Deposit and Removal Bylaw

**CITY OF PRINCE GEORGE**  
**BYLAW NO. 9030, 2019**

**A Bylaw of the City of Prince George to regulate the removal and deposit of soil.**

**WHEREAS** the City, pursuant to section 8(3)(m) of the *Community Charter*, wishes to regulate, prohibit, and impose requirements in relation to the removal of Soil and the deposit of Soil or other material, and protect and enhance the well-being of its community;

**AND WHEREAS** the unauthorized removal of Soil and deposit of Soil or other material creates risk to public assets, the health and safety of persons and property, the natural environment, and the integrity of a secure and productive resource base.

**NOW THEREFORE** the Council of the City of Prince George in open meeting assembled, **ENACTS AS FOLLOWS:**

**1. SHORT TITLE**

**1.1** This Bylaw may be cited for all purposes as the “City of Prince George Soil Removal and Deposit Bylaw No. 9030, 2019”.

**2. REPEAL**

**2.1** “City of Prince George Soil Removal and Deposit Bylaw No. 7022, 1999” and all amending bylaws thereto are hereby repealed.

**3. APPLICATION**

**3.1** This Bylaw applies within the boundaries of the City of Prince George.

**3.2** Nothing in this Bylaw shall preclude anyone from complying with the provisions of any other local, provincial, or federal regulations or enactments.

**3.3** Any enactment referred to herein is a reference to an enactment of British Columbia, and the regulations thereto, as amended, revised, consolidated or replaced from time to time, and any bylaw referred to herein is a reference to an enactment of the Council of the City of Prince George, as amended, revised, consolidated, or replaced from time to time.

**4. DEFINITIONS**

**4.1** In this Bylaw, the following terms and words have the meanings set out below:

**Abut:** contiguous to, or physically touching, and when used with respect to properties,

means two or more properties that share a common property line of at least one point.

**Adjacent:** when used with respect to sites, means Abutting, or would Abut, if not for a Highway, Watercourse, right of way, or easement.

**Applicant:** the owner of land or a representative of the owner duly authorized to act on the owner's behalf.

**Authorized Person:** the head of the Department responsible for the land use planning function, or a person designated in writing by the head of the Department responsible for the land use planning function to carry out any act or function under this Bylaw.

**Berm:** an elongated, raised barrier constructed of Soil, measuring a minimum 2.5 metres in height above the natural grade, a minimum 7.5 metres in width at the base, and seeded with grass or other native plant species, for the purposes of intercepting noise, dust and the views of Removal or Deposit Operations.

**Buffer:** a strip of forested or undisturbed land, consisting of native trees, shrubs and ground cover, at a minimum density of four plants per square metre, for the purposes of intercepting noise, dust and the views of Removal or Deposit Operations.

**City:** City of Prince George.

**Council:** Council of the City of Prince George.

**Crusher:** any device or structure used, or intended to be used, to crush or break Soil.

**Deleterious Substance:** any substance that, if added to any water, would degrade or alter the quality of that water so that it becomes toxic or harmful.

**Deposit:** the act of placing, storing, spilling, or releasing directly or indirectly, soil on any land, where the Soil did not previously exist or stand, including a Stockpile or other storage facility.

**Designated Soil Removal or Deposit Area:** the land(s) identified in Schedule "A" to this Bylaw.

**Disturbance Area:** that part of the land which has been or will be made devoid of vegetative cover, or otherwise physically altered as a result of Removal or Deposit Operations.

**Earthworks:** the disturbance of land surfaces by blading, contouring ripping, moving, removing, placing or replacing Soil.

**Fugitive Dust:** dust generated by sweeping and maintenance operations on Highways, parking areas and other paved surfaces or dust generated from Vehicle traffic or wind on

gravel lots, paved and gravel roads, construction sites and Soil and gravel pits.

**Groundwater Protection Area:** an area identified on Schedule D-1: Groundwater Protection Development Permit Areas of the “Official Community Plan Bylaw No. 8383, 2011”.

**Highways:** any public street, road, sidewalk, lane, bridge, boulevard, or any other public way intended for the general public for the passage of vehicles within the City; or land as shown as road on a plan of survey that has been filed or registered in the Land Title and Survey Authority or used as a public road.

**Leave Strip:** an area of land recommended by a Qualified Professional where development is regulated to preserve, protect, restore or enhance the Natural Features, Functions, and Conditions and Watercourses.

**Long Term Permit:** a permit that may be issued by the Authorized Person pursuant to Section 9 of this Bylaw.

**Lot Grading Plan:** a plan and sections illustrating the proposed grade elevations, contours and phased slopes of the site along with the locations of Removal or Deposit on a property.

**Natural Features, Functions and Conditions:** include, but are not limited to the following:

- a) large organic debris that falls into a Watercourse or streamside area, including: logs, snags and root wads;
- b) areas for channel migration, including active floodplains;
- c) side channels, intermittent Watercourse, seasonally wetted contiguous areas and floodplains;
- d) the multi-canopied forest and ground cover adjacent to Watercourses that moderates water temperatures, provides a source of food, nutrients and organic matter to Watercourses, establishes root matrices that stabilize Soils and stream banks, thereby minimizing erosion, and buffers Watercourses from sedimentation and pollution in surface runoff;
- e) a natural source of Watercourse bed substrates; and
- f) permeable surfaces that permit infiltration to moderate water volume, timing and velocity and maintain sustained water flows in Watercourses, especially during low flow periods.

**Permittee:** a person who has received a Long Term Permit or Short Term Permit under this Bylaw.



**Prime Consultant:** a Qualified Professional acting as the primary contact with the Authorized Person regarding Removal or Deposit Operations for which a Long Term Permit or Short Term Permit is required.

**Private Service Corridor:** land accommodating the servicing of any building or facility with any water, sewer, energy, or communications system or utility, directly from any Highway, right-of-way, or municipal property.

**Public Service Corridor:** land accommodating the collection or distribution of any water, sewer, storm, energy, or communication system or utility, but excludes Private Service Corridors.

**Qualified Professional:** an applied scientist or technologist, acting alone or together with another Qualified Professional that is registered and in good standing in British Columbia with an appropriate professional organization constituted under an Act, acting under that association's code of ethics and subject to disciplinary action by that association; the individual is acting within that individual's area of expertise, the individual is a full member and is not in training, articling, retired on leave, or a student member.

**Reclamation:** the rehabilitation of the land in order to mitigate environmental effects of Removal or Deposit Operations with the objective of creating a productive ecosystem.

**Reclamation Liability:** a Qualified Professional's estimate of the dollar cost of providing the required Reclamation pursuant to this Bylaw.

**Removal:** the act of removing Soil from any lands in the City.

**Removal or Deposit Operations:** any activities, works or functions associated with or involving Removal or Deposit including excavation, filling, stockpiling, screening, on-site and off-site hauling of Soil, Reclamation, site preparation, Earthworks, and internal roadways.

**Screeener:** a device or structure requiring a motor to sift, sort or separate Soil.

**Short Term Permit:** a permit that may be issued by the Authorized Person pursuant to Section 7 of this Bylaw.

**Soil:** sand, gravel, rock, peat and any other substance of which the land is composed of.

**Stage:** the period during which a portion of the total amount of Soil planned to be Removed or Deposited is being, will be, or has been Removed or Deposited.

**Stockpile:** an artificial accumulation of Soil.

**Top of Bank:** the points closest to the boundary of the active floodplain of a watercourse or water body where a break in the slope of the land occurs such that the grade beyond the

break is flatter than 3 (horizontal) to 1 (vertical) at any point \* for a minimum distance of 15.0 metres measured perpendicularly from the break.

Where banks are not well defined (as determined by a Qualified Professional), the Top of Bank is equivalent to the high water mark.

*\* Minor variations in elevation may, at the discretion of the Authorized Person, be discounted where slope change greater than 3 (horizontal) to 1 (vertical) results in less than 1.0 metre elevation gain between the points where the slope is less than 3 (horizontal) to 1 (vertical).*

**Top of Ravine Bank:** the first significant break in a ravine slope (as determined by a Qualified Professional) where the break occurs such that the grade beyond the break is flatter than 3 (horizontal) to 1 (vertical) at any point \* for a minimum distance of 15.0 meters measured perpendicularly from the break, and the break does not include a bench within the ravine that could be developed.

*\* Minor variations in elevation within the 15.0 metres may, at the discretion of the Authorized Person, be discounted where slope change greater than 3 (horizontal) to 1 (vertical) results in less than 1.0 metre elevation gain between the points where the slope is less than 3 (horizontal) to 1 (vertical).*

**Temporary Measures:** operations that will cease or be altered during the course of the project for seasonal consideration or shut-down measures.

**Watercourse:** includes any of the following:

- a) a Watercourse, whether it usually contains water or not;
- b) a pond, lake, river, creek or brook;
- c) a ditch, spring or wetland that is connected by surface flow to something referred to in paragraph a) or b).

**Weed:** a plant species designated by the *Weed Control Act* and Regulation to be a noxious weed, or a plant species categorized by the Northwest Invasive Plant Council as an invasive plant.

## 5. RESTRICTIONS

### 5.1 No person shall Remove or Deposit unless:

- a) A Long Term Permit or Short Term Permit has been issued for that Removal or Deposit pursuant to this Bylaw; or

- b) Removal or Deposit is allowed without a Long Term Permit or Short Term Permit by Section 6 of this Bylaw.

**5.2** Where a Long Term Permit or Short Term Permit has been issued for Removal or Deposit, no person shall Remove or Deposit except in compliance with the terms of the Long Term Permit or Short Term Permit, and this Bylaw.

## **6. EXEMPTIONS FROM PERMIT REQUIREMENT**

**6.1** Removal or Deposit is permitted without a Long Term Permit or Short Term Permit where Removal or Deposit:

- a) is by a florist, nurseryman, horticulturist or farmer and the Soil is required and used on lands upon which that person carries on such trade, purpose or use;
- b) is required for the erection of a building or structure on the land subject to Removal or Deposit, provided a valid building permit has been issued for that building or structure and the Removal and Deposit is only for the immediate building footprint and Earthworks related to the building footprint;
- c) is required to create or maintain a Private Service Corridor, a driveway, or a paved parking area for which a building permit or development permit is not required, and which is necessary to accommodate a permitted use on that land;
- d) occurs on a Highway right-of-way, and is required for construction or maintenance of the Highway;
- e) occurs on a Public Service Corridor and is required for its creation or maintenance;
- f) results in a net increase or decrease of less than 100 cubic metres of Soil per parcel per year;
- g) is in accordance with a preliminary review letter for subdivision issued by the Approving Officer for the City unless stated otherwise as a condition of the preliminary review letter;
- h) is required as part of a solid waste processing and disposal operation which has approval pursuant to all applicable federal, provincial and municipal regulations and bylaws;
- i) is required as part of the clean-up or remediation of contaminated Soils as directed or approved by the Ministry of Environment;
- j) is required for the construction or maintenance of a private sewage disposal system;

- k) is required for the construction or maintenance of a floodplain management activity in accordance with a plan approved by the City, or federal or provincial governments; or
- l) is performed by an employee or agent of the City in the construction or maintenance of a public trail, park or recreation facility, or the Reclamation of a disturbed area, or in association with any other public works or services function.

## **7. SHORT TERM PERMITS**

**7.1** An owner of land may apply for the issue of a Short Term Permit. The Authorized Person may issue a Short Term Permit provided:

- a) the parcel on which Removal or Deposit is proposed is one hectare or greater;
- b) the total amount of Soil to be Removed or Deposited is less than or equal to 25,000 cubic metres;
- c) there is compliance with all provisions of this Bylaw; and
- d) the Removal or Deposit would improve the suitability of the land for a use permitted in the “City of Prince George Zoning Bylaw No. 7850, 2007”, or supported by the Future Land Use designation identified on Schedule B-6: Future Land Use of the “Official Community Plan Bylaw No. 8383, 2011”, as determined by the Authorized Person.

**7.2** The Removal or Deposit authorized and the Reclamation required in a Short Term Permit shall be complete within thirty-six (36) months from the date of issue of the Short Term Permit. Successive Short Term Permits may be issued provided that the total amount of Soil Removed or Deposited from a parcel under all Short Term Permits does not exceed the amount permitted under Section 7.1 of this Bylaw.

### **Short Term Permit Applications**

**7.3** Applications for a Short Term Permit shall be on the form provided by the Authorized Person and contain the following;

- a) The purpose of the Removal or Deposit;
- b) The legal description of the land on which the Removal or Deposit is to occur;
- c) The name, address, and signature of the Applicant;
- d) The written consent of the land owner if the land owner is not the Applicant;
- e) The plans identified in Section 9.6 (a) to (d) inclusive of this Bylaw;

- f) The reports identified in Section 9.7 (a) to (h) inclusive of this Bylaw;
  - g) A current title search for the subject property;
  - h) Copies of any permits and approvals of federal and provincial authorities required by statute or regulation in connection with the proposed Removal or Deposit Operations;
  - i) A valid business license for proposed operations;
  - j) The Short Term Permit application fee set out in the “City of Prince George Comprehensive Fees and Charges Bylaw No. 7557, 2004”; and
  - k) Any additional information the Authorized Person determines is required to assist the Authorized Person in their consideration of the application.
- 7.4 The plans and reports outlined in Sections 7.3 e) and f) shall be provided with an application for a Short Term Permit, unless not considered necessary by the Authorized Person to protect properties adjacent to the proposed site of Removal or Deposit Operations, to ensure public safety, or to protect the environment.

#### **Short Term Permit Issuance**

- 7.5 An application for a Short Term Permit may be refused in any specific case. On request, the person making the decision must give reasons for the refusal.
- 7.6 Upon the issuance of a Short Term Permit, the Applicant identified in Section 7.3 c) is the Permittee for all purposes of this Bylaw, and the City may enforce all the provisions of this Bylaw against the Permittee and the land owner.

#### **Short Term Permit Transfer**

- 7.7 No Short Term Permit issued pursuant to this Bylaw or any interest shall be transferred or assigned. Where a permit holder sells, transfers or otherwise disposes of his interest in the land in respect of which a subsisting Short Term Permit has been issued, he shall immediately cease the Removal or Deposit Operations, and the permit shall become void and of no effect and shall be returned to the Authorized Person.

### **8. DESIGNATION**

- 8.1 A Long Term Permit may be issued to Remove or Deposit only on land identified as a Designated Soil Removal or Deposit Area as indicated on Schedule "A" of this Bylaw.
- 8.2 An owner of land may apply for an amendment to Schedule “A” of this Bylaw. Every application to amend Schedule "A" shall be submitted to the City on the prescribed form

available from the Authorized Person, and shall be accompanied by the application fee as set out in the "City of Prince George Comprehensive Fees and Charges Bylaw No. 7557, 2004".

### Designation Application

**8.3** Applications to amend Schedule "A", on the form provided by the Authorized Person, shall contain all of the following:

- a) The purpose of the Removal or Deposit;
- b) The legal description(s) of the land on which the Removal or Deposit is to occur;
- c) The name, address, and signature of the Applicant;
- d) The written consent of the owner of the land on which the Removal or Deposit is to occur if the land owner is not the Applicant;
- e) A current title search for the land;
- f) A site plan showing:
  - i. the legal boundaries of the land and all existing pertinent natural and artificial features including, but not limited to, tree cover, ground cover, Watercourses, Leave Strips, Top of Banks, Top of Ravine Banks, wells, buildings, structures, fence lines, trails, easements, Highways, Public Service Corridors, Private Service Corridors, setbacks, Buffers and Berms;
  - ii. the existing vertical contours of the land at a scale of 1:1000 or larger, with a contour interval of two (2) metres or less; and
  - iii. the proposed final vertical contours of the land after Removal or Deposit at a scale of 1:1000 or larger, with a contour interval of two (2) metres or less;
- g) The proposed access location and haul route, to and from the land;
- h) The estimated volume in cubic metres of Soil to be Removed from or Deposited on the land in total, and the data used to calculate the quality and quantity of Soil to be Removed or Deposited;
- i) The proposed future use of the land following Reclamation, and the manner by which Reclamation shall prepare the land for future use; and
- j) Any additional information the Authorized Person determines is required to assist Council or the Authorized Person in their consideration of the application.

### **Designation Process**

- 8.4** No amendments to Schedule "A" shall be adopted until Council has held a hearing.
- 8.5** Notice of the hearing identified in Section 8.4 shall:
- a) state the time, date, location, and purpose of the hearing; and state the legal description of the land that is the subject of the hearing;
  - b) be published in not less than 2 consecutive issues of a local newspaper the last publication to appear not less than 3 nor more than 10 days before the hearing;
  - c) be mailed or otherwise delivered at least 10 days before the hearing to the Applicant, the owners and tenants in occupation of the land that is the subject of the hearing, and the owners, and tenants in occupation of all land within 30 metres of any property boundary of the land that is the subject of the hearing;
  - d) be mailed at least 10 days before the hearing to the owners, and tenants in occupation of all land Adjacent to all proposed haul routes leading from the location of the Removal and Deposit operations to the closest arterial road, as identified on Schedule B-10: 15 Year Major Road Network of the "Official Community Plan Bylaw No. 8383, 2011";
  - e) be posted on a sign at least 10 days before the hearing and located and maintained on the land which is the subject of the application in accordance with the specifications set out in Schedule "B" of this Bylaw; and
  - f) Sections 8.5 c), d) and e) do not apply if 10 or more parcels owned by 10 or more persons are the subject of an amendment to Schedule "A" of this Bylaw.

## **9. LONG TERM PERMITS**

- 9.1** An owner of land may apply for the issue of a Long Term Permit. The Authorized Person may issue a Long Term Permit only in respect of land identified as a Designated Soil Removal or Deposit Area, provided there is compliance with all provisions of this Bylaw.
- 9.2** The Prime Consultant shall be responsible for the co-ordination, and presentation of the information required in the plans and reports and to ensure that Removal or Deposit Operations have been designed in compliance with the requirements of this Bylaw.

### **Long Term Permit Stages**

- 9.3** Where less than 250,000 cubic metres of Soil is planned to be Removed or Deposited there shall be at least two consecutive Stages.
- 9.4** Where 250,000 cubic metres or more is planned to be Removed or Deposited there shall

be at least three consecutive Stages.

### **Long Term Permit Application**

**9.5** Applications for a Long Term Permit shall be on the form provided by the Authorized Person and contain all of the following:

- a) The purpose of the Removal or Deposit;
- b) The legal description of the land on which the Removal or Deposit is to occur;
- c) The name, address, and signature of the Applicant;
- d) The name, mailing address, and signature of the Prime Consultant;
- e) The written consent of the owner of the land on which the Removal or Deposit is to occur if the land owner is not the Applicant;
- f) The plans identified in Section 9.6 of this Bylaw;
- g) The reports identified in Section 9.7 of this Bylaw;
- h) A current title search for the subject property;
- i) Copies of any permits and approvals of federal and provincial authorities required by statute or regulation in connection with the proposed Removal or Deposit Operations;
- j) The applicable Long Term Permit application fee set out in the City of Prince George "Comprehensive Fees and Charges Bylaw No. 7557, 2004"; and
- k) Any additional information the Authorized Person determines is required to assist the Authorized Person in their consideration of the application.

### **Plans**

**9.6** Plans and data required for Long Term and Short Term Permit applications shall be provided with input from appropriate Qualified Professionals and shall include the following:

- a) A site plan showing:
  - i. the legal boundaries of the land and all existing pertinent natural and artificial features including, but not limited to, tree cover, ground cover, Watercourses, Leave Strips, Top of Banks, Top of Ravine Banks, wells, buildings, structures, fence lines, trails, easements, Highways, Public Service Corridors, Private Service Corridors setbacks, Buffers and Berms; and



- ii. the existing vertical contours of the land at a scale of 1:1000 or larger, with a contour interval of two (2) metres or less;
- b) A progressive development and Reclamation plan showing:
  - i. the proposed sequence of Removal or Deposit by means of topographic maps with a contour interval of two (2) metres or less, representing the land at the end of each consecutive Stage;
  - ii. the proposed timing for locations of Stockpiles and Berms, and the proposed locations of machinery, buildings and other structures and improvements on the land during Removal or Deposit at each consecutive Stage;
  - iii. the proposed Reclamation to be completed at the end of each consecutive Stage; and
  - iv. A re-vegetation plan for the Reclamation of the Disturbance Area showing all plantings and the commencement and completion date of each Stage, and the methods for identifying and managing Weeds;
- c) A Soil management plan demonstrating compliance with Schedule “C”; and
- d) A final Reclamation plan showing:
  - i. the legal boundaries of the land and the proposed final conditions of the land including, but not limited to, tree cover, ground cover, Watercourses, Leave Strips, Top of Banks, Top of Ravine Banks, wells, buildings, structures, fence lines, trails, easements, Highways, Public Service Corridors, and Private Service Corridors; and
  - ii. the proposed vertical contours of the land at a scale of 1:1000 or larger, with a contour interval of two (2) metres or less.

### Reports

- 9.7** A report that discusses the compliance of the proposed Removal or Deposit Operation with this Bylaw shall be provided with input from appropriate Qualified Professionals. If required by the Authorized Person, the report shall discuss the compliance of previous Removal or Deposit Operations on the land with this Bylaw and Long Term and Short Term Permit.

The report must contain all of the following:

- a) The methods proposed and previously used to:
  - i. control sedimentation, erosion, drainage, slope stability, and dust within and from the land subject to Removal or Deposit;

- ii. control dust and debris along the transportation route to and from the land subject to Removal or Deposit;
  - iii. control noise within and from the land subject to Removal or Deposit; and
  - iv. visually screen the Removal or Deposit Operations from Adjacent land.
- b) The fencing, enclosing methods, and signage proposed to restrict unauthorized access to the land;
  - c) The proposed access location and haul route to and from the land subject to Removal or Deposit;
  - d) The estimated volume in cubic metres of Soil to be Removed from or Deposited on the land in total and during consecutive Stages, with a copy of any calculations, cross-sections or other engineering data and pertinent information used in calculating such estimated total volume;
  - e) The manner by which the land shall be progressively brought to the final proposed contours as soon as practical;
  - f) The proposed future use of the land following Reclamation, the manner by which the proposed Reclamation prepares the land for such future use, the proposed Reclamation of the land, and the proposed compaction levels of all land subject to Deposit;
  - g) An estimate of the amount of security required by this Bylaw and a detailed breakdown of the estimate; and
  - h) Temporary Measures.

### **Long Term Permit Issuance**

**9.8** The Authorized Person may refuse to issue a Long Term Permit if the plans, data and specifications do not meet satisfactory requirements of this Bylaw or if the proposed Removal or Deposit will or is reasonably likely to:

- a) Damage, destroy, obstruct, divert or impede the flow of or otherwise injuriously affect any Watercourse, Public Service Corridor or Private Service Corridor, Highway, structures or other improvements on the land or on any Abutting or Adjacent land, whether privately or publicly owned;
- b) Contravene any bylaw of the City;

- c) Threaten the health of drinking water, health, safety or welfare of the public;
- d) Result in the use of the lands in a manner inconsistent with the current zoning or the future land use as designated on Schedule B-6: Future Land Use the “Official Community Plan Bylaw No. 8383, 2011” for the lands; or
- e) Substantially alter the appearance and nature of the surrounding area.

**9.9** A Long Term Permit shall remain valid until the earlier of:

- a) The completion of the Removal or Deposit authorized by this Long Term Permit;
- b) The arrival of the expiry date specified in the Long Term Permit; or
- c) Revocation of the Long Term Permit under this Bylaw.

#### **Long Term Permit Transfer**

**9.10** No Long Term Permit issued pursuant to this Bylaw or any interest shall be transferred or assigned. Where a Long Term Permit holder sells, transfers or otherwise disposes of his interest in the land in respect of which a subsisting Long Term Permit has been issued, he shall immediately cease the Removal or Deposit Operations, and the Long Term Permit shall become void and of no effect and shall be returned to the Authorized Person.

### **10. ANNUAL LONG TERM PERMIT REVIEW**

**10.1** Every Long Term Permit shall be reviewed annually, and where plans or reports are amended, the fee for annual Long Term Permit review set out in the “City of Prince George Comprehensive Fees and Charges Bylaw No. 7557, 2004”, shall be paid to the City.

**10.2** As part of the annual Long Term Permit review, the Prime Consultant shall provide the Authorized Person with a letter discussing, to the Authorized Person’s satisfaction, the Removal or Deposit Operations for both the previous and forthcoming year in relation to the Long Term Permit and this Bylaw within a thirty (30) day period before the anniversary date of the issuance of the Long Term Permit.

**10.3** As part of the annual Long Term Permit review process, the plans and reports made part of a Long Term Permit shall be amended and resubmitted for acceptance when:

- a) Removal or Deposit Operations do not comply with this Bylaw or the Long Term Permit; or
- b) the plans and reports made part of the Long Term Permit indicate that the Removal or Deposit Operations may result in non-compliance with this Bylaw.

**10.4** As part of the annual Long Term Permit review process, confirmation of a valid business license shall be provided.

**10.5** The annual Long Term Permit review process shall be complete when, in the opinion of the Authorized Person, Removal or Deposit Operations are in compliance with this Bylaw and that the required plans and reports are correct, accurate and indicate that the Removal or Deposit Operations are in compliance with this Bylaw.

## **11. ISSUANCE, REFUSAL AND SUSPENSION**

**11.1** Council delegates to the Authorized Person the powers of Council to issue, amend, refuse, impose requirements, set conditions and standards, and require security for a Long Term Permit and Short Term Permit under this Bylaw.

**11.2** Council delegates to the Authorized Person the powers of Council to cancel or suspend a Long Term Permit or Short Term Permit in any specific case. On request, the person making the decision must give reasons for the refusal. Reasons for refusal may include, but are not limited to:

- a) Failure to comply with the terms or conditions of the Long Term Permit or Short Term Permit;
- b) Failure to satisfy the requirements of Section 10 by the anniversary date of the issuance of any Long Term Permit;
- c) Failure to comply with this Bylaw; or
- d) Failure to comply with another City bylaw.

## **12. REMOVAL OR DEPOSIT CONDITIONS**

**12.1** All Removal or Deposit Operations, including Removal or Deposit described in Section 6, must comply with the following conditions:

- a) All of the requirements set out in Schedule "C" to this Bylaw;
- b) All drainage facilities, Highways, and sidewalks shall be kept clean and free of Soil;
- c) Removal or Deposit Operations shall not undermine or directly or indirectly contribute to the damage of any Highway or Adjacent property;
- d) Removal or Deposit Operations shall not directly or indirectly result in the sedimentation or disturbance of a Watercourse or its Leave Strip;

- e) Removal or Deposit Operations must be conducted so that Fugitive Dust does not escape the site in such a manner as to cause or significantly contribute to the cause of injury or damage to human health, plant or animal life, or property, or so as to unreasonably interfere with the enjoyment of life or property. Control and mitigation of Fugitive Dust must be in accordance with the requirements set out in Schedule "D" of this Bylaw and in compliance with the "City of Prince George Clean Air Bylaw No. 8916, 2017";
- f) No garbage, metal, wood, slash, roots, recycled or waste asphalt, recycled or waste concrete, or Soil laden with invasive plants or seeds shall be buried or otherwise disposed of on the land subject to Removal or Deposit Operations;
- g) No herbicide shall be used for the control of Weeds on any land subject to Removal or Deposit Operations and which is designated as a Groundwater Protection Area;
- h) No vehicles, asphalt, recycled or waste asphalt, recycled or waste concrete, portable toilets, herbicides, hydrocarbon products, or any other Deleterious Substance, shall be stored, deposited or applied on any land designated as a Groundwater Protection Area; and
- i) Removal or Deposit Operations shall not create or exacerbate landslide hazards which pose a risk of injury or damage.

**12.2** Removal or Deposit Operations requiring a Long Term Permit or Short Term Permit must comply with all of the following conditions:

- a) All damage to City, provincial, or privately owned lands, drainage facilities, Highways, other works, or Watercourses and Leave Strips, resulting from any activities associated with Removal or Deposit Operations shall be repaired or replaced by the Permittee to the satisfaction of the City, applicable provincial agency, and private landowner, at the expense of the Permittee;
- b) All surface run off on the land shall drain to facilities on that land in a manner that limits erosion, traps sediment and encourages groundwater infiltration;
- c) Access must be from a location which minimizes the impact of Removal or Deposit Operations on local traffic and residential areas, and which minimizes the potential for damage to Highways, as approved by the Authorized Person;
- d) Removal or Deposit Operations shall result in the site being progressively brought to final grade as soon as practical, and any area brought to final grade that is not used for Removal or Deposit Operations must be reclaimed according to Section 14.1 within one year of being brought to final grade;
- e) A Buffer of not less than 50 metres in width shall be maintained around the

- perimeter of the land subject to Removal or Deposit Operations except for points of access;
- f) A Berm shall be maintained between the Buffer and the Removal or Deposit Operations except for points of access. Where the physical grade or site conditions of the land prevent the establishment of a Berm, the Buffer shall be double in width as that prescribed in Sections 12.2 e);
  - g) Where the total amount of Soil proposed for Removal or Deposit exceeds 25,000 cubic meters, the Removal or Deposit Operations, except the Buffer, Berms, erosion or siltation control devices, and the access route, must be separated by a minimum setback of 100 metres from the boundary of any land which is zoned for any residential, rural residential or institutional use;
  - h) Removal or Deposit may take place within the specified setback area just prior to the end of each Stage if:
    - i. Removal or Deposit in the setback area is required to grade the land in a manner suitable for future use and is in accordance with the final Reclamation plan provided pursuant to Section 9.6 d); or
    - ii. Removal or Deposit is required to create or remove Berms within the setback area.
  - i) No setback, Buffer, or Berm will be required along the property line with a property Abutting the lands for which a Long Term Permit or Short Term Permit has been granted if the owner of the Adjacent property has agreed, in writing, to eliminate the setback, Buffer and Berm requirements because of existing or proposed Removal or Deposit Operations on that Abutting property;
  - j) All buildings and structures erected in connection with a Long Term Permit or Short Term Permit shall be temporary in nature and shall be removed upon completion of the Removal or Deposit Operations;
  - k) Unless specified in the Long Term Permit or Short Term Permit, the Permittee shall conduct or permit Removal or Deposit Operations to be conducted only during the following times:
    - i. Monday through Friday inclusive, from 8:00 a.m. to 7:00 p.m.; and
    - ii. Saturday, Sunday and statutory holidays from 9:00 a.m. to 5:00 p.m.
  - l) Unless specified in the Long Term Permit or Short Term Permit, the Permittee shall allow a Screener or Crusher to operate only during the following times:
    - i. Monday through Friday inclusive, from 8:00 a.m. to 5:00 p.m.; and

- ii. Saturday, Sunday and statutory holidays from 9:00 a.m. to 5:00 p.m.
- m) A Screener or Crusher shall:
  - i. be surrounded by a Berm, the elevation of the crest of which is not below the elevation of the top of the Screener or Crusher, and the design, configuration and location of the Berm shall be developed to effectively reduce noise from the Screener or Crusher and Removal or Deposit Operations; and
  - ii. not be located within 200 metres of the Boundary of any land which is used for any residential, rural residential or institutional purpose.

**12.3** The Authorized Person may amend a Long Term Permit or Short Term Permit to allow Removal or Deposit Operations contrary to Section 12.2 k) and Section 12.2 l) for up to thirty days per year, when the following conditions are met:

- a) A request is made in writing to the Authorized Person;
- b) It is demonstrated that the amendment to the Permit is necessary to meet a demand for Soil which is required within a limited time frame for a specific large project, and cannot be met under the restrictions in Section 12.2 k) and Section 12.2 l) for of this Bylaw; and
- c) It is demonstrated that the Removal or Deposit Operations are to be undertaken in a manner which shall not have a significant negative impact on Adjacent land use.

### **13. SEDIMENT AND EROSION CONTROL**

**13.1** Sedimentation and erosion control devices shall be maintained on land that is or was subject to Removal or Deposit Operations until the applicable Long Term Permit or Short Term Permit expires or for as long as the Authorized Person determines they are necessary for sedimentation or erosion control.

**13.2** Sedimentation and erosion control vegetation shall be maintained on the land that is or was subject to Removal or Deposit Operations until the applicable Long Term Permit or Short Term Permit expires or for as long as the Authorized Person determines the vegetation is necessary for sedimentation or erosion control.

### **14. RECLAMATION**

**14.1** Every Permittee and owner of land for which a Long Term Permit or Short Term Permit is issued shall ensure that the land subject to the Long Term Permit or Short Term Permit is reclaimed according to the following:

- a) The final topography, slopes, Soil compaction and other site conditions are suitable

for the land-use identified for the land in the “Official Community Plan Bylaw No. 8383, 2011”;

- b) All surfaces of the Disturbance Area shall have a maximum slope of 3:1 (horizontal:vertical), unless the immediately surrounding natural slope is greater than 3:1, in which case the slope of the Disturbance Area may conform to the slope of the surrounding land. In no case may the slope be steeper than 2:1, or the slope necessary for stability of the Soil in question;
  - c) All surfaces of the Disturbance Area that are not a Highway, building site, or points of access to a public road, shall consist of Soil suitable to support a self sustaining rooted ground cover in accordance with the requirements in Schedule “C” of this Bylaw;
  - d) All surfaces of the Disturbance Area that are not a Highway, building site, or point of access to a public road, shall be covered with an established and diverse growth of native grasses and other rooted ground cover, shrubs, and trees, either by seeding, or planting as identified by the re-vegetation plan;
  - e) The land shall be cleared of all equipment, machinery, scrap materials, vehicles, garbage, metal, lumber, recycled or waste asphalt, and recycled or waste concrete;
  - f) All Reclamation shall be performed according to this Bylaw, all other City bylaws, and the Long Term Permit or Short Term Permit issued; and
  - g) All structures not in conformance with the permitted uses of the land set out in the “Official Community Plan Bylaw No. 8383, 2011” or the City of Prince George Zoning Bylaw No. 7850, 2007”, shall be cleared from the land.
- 14.2** All Disturbance Areas shall be fully reclaimed according to the provisions of Section 14 within a period of twelve (12) months of the earliest of:
- a) the cancellation or expiry of a Long Term Permit or Short Term Permit; or
  - b) the completion of Removal or Deposit permitted under a Long Term Permit or Short Term Permit.

## **15. INTERIM RECLAMATION**

**15.1** Upon written request, the Authorized Person may exclude land which a Long Term Permit is issued from Section 14 of this Bylaw for up to three years by approving an interim Reclamation plan.

**15.2** An interim Reclamation plan may be approved by the Authorized Person if all of the following conditions are met:



- a) It is demonstrated that there remains in excess of 25,000 cubic metres of marketable Soil to be Removed from the land; or the landowner can demonstrate progressive steps towards subsequent development such as a submitted application for a change in zoning or subdivision of the land;
- b) The interim Reclamation plan indicates, to the Authorized Person's satisfaction, that the proposed interim Reclamation measures shall be sufficient to control erosion of Disturbance Areas and that the conditions of Sections 12.1 and 12.2 of this Bylaw shall be met at all times; and
- c) The total amount of security set out in Section 16 of this Bylaw shall remain with the City until the Reclamation required pursuant to Section 14 of this Bylaw, and the Long Term Permit, has been completed; or the land has been developed as set out in the interim Reclamation plan.

**15.3** The interim Reclamation plan shall not remain valid and in effect if a Long Term Permit cancelled.

## **16. SECURITY**

**16.1** Prior to issuance of a Long Term Permit or Short Term Permit, and the completion of an annual Long Term Permit review, an Applicant is required to provide the City with security in the form of cash; certified cheque; or unconditional, irrevocable and automatically renewable letter of credit. The security shall be held by the City and, if provided, the letter of credit shall be maintained as good and valid security by the Permittee at all times as required by this Bylaw. The security amount required shall be reviewed and, if necessary, adjusted annually and shall at all times be the greater of:

- a) an amount equivalent to the Reclamation Liability as determined by a Qualified Professional during the two-month period prior to the date of issuance of the Long Term Permit or Short Term Permit or, in the case of annual Long Term Permit reviews, the anniversary date of the issuance of a Long Term acceptable to the Authorized Person; or
- b) in the case of annual Long Term Permit review, \$5,000 for each and every hectare, or part thereof, of Disturbance Area with a slope of less than 3:1 (horizontal:vertical), and \$7,000 for every hectare, or part thereof, of Disturbance Area with a slope equal to or greater than 3:1, that is not reclaimed to the standard or condition required under this Bylaw or shown on the plans submitted as part of the Long Term Permit, as determined during the two month period prior to the anniversary date of the issuance of a Long Term Permit.

**16.2** In no case shall the security provided equal less than \$5,000.00 per hectare of Disturbance Area, or part thereof. In no case shall a Long Term Permit or Short Term Permit be issued prior to security of at least \$5,000.00 being provided to the City. The

City may cancel or suspend a Long Term Permit or Short Term Permit where the security held by the City at any time is less than \$5,000.00.

- 16.3** If any person does not comply with the terms and conditions of a Long Term Permit, Short Term Permit, or a requirement under this Bylaw, or in connection with Removal or Deposit causes damage to City property, and does not within 30 days following a request for compliance or repair by the Authorized Person remedy the non-compliance or complete the requested repair, any security paid by the person under this Bylaw shall be forfeited to the City and may be used by the City to remedy the non-compliance or repair the damage to City property.

If no security is held by the City, or the security held is insufficient to cover the City's actual cost of remedying the non-compliance or repairing the damage to City property, the City may remedy the non-compliance or repair the damage at the expense of the person and recover the costs incurred from the person as a debt.

- 16.4** Any amount payable by a person under Section 16.3 or Section 16.11 is due and payable by December 31<sup>st</sup> in the year in which remedial or repair work is done (or such later date as may be determined by the Authorized Person), may be collected in the same manner and with the same remedies as property taxes and where unpaid by December 31 in the year in which it is due, is deemed to be taxes in arrear.
- 16.5** In the event that the City expends any part of the required security the Permittee shall, within one (1) calendar month of notification of such expenditure, provide the City with further security to bring the total amount of security held by the City to the full amount required under Sections 16.1 and 16.2.
- 16.6** In the event that the Permittee fails to renew or replace any letter of credit and deliver such renewal or replacement to the City at least 14 days prior to the expiry of any letter of credit then held by the City, the City may draw down the entire amount of the then current letter of credit without notice to the Permittee and the City may retain the monies as security in accordance with Section 16.
- 16.7** In the event that a Long Term Permit or Short Term Permit is cancelled or suspended the security shall be forfeited to the City, in whole or in part, and may be used at any time to remedy non-compliance with this Bylaw, the Long Term Permit or the Short Term Permit, repair any damage to City property resulting from Removal or Deposit Operations, or to carry out Reclamation of the land subject to Removal or Deposit Operations.
- 16.8** In addition to Section 16.3, the security may be used at any time for the cleaning of Soil or other debris from Highways, sidewalks, boulevards, or drainage facilities which may be required as a result of the Removal or Deposit Operations.
- 16.9** The security shall be returned to the Permittee provided that:
- a) the Disturbance Area has been reclaimed in accordance with this Bylaw; and

- b) the Authorized Person has received a report, to the satisfaction of the Authorized Person, from the Prime Consultant in the case of a Long Term Permit, and from the Permittee in the case of a Short Term Permit, confirming that the Disturbance Area has been reclaimed in accordance with this Bylaw and the Long Term Permit or Short Term Permit.

**16.10** Within 30 days of receiving the report required under Section 16.9 b), the Authorized Person must:

- a) return the security to the Permittee; or
- b) reject the report and give written notice to the Permittee of the deficiencies in the report or in the Reclamation performed.

**16.11** If the Permittee has not remedied the deficiencies referred to in Section 16.10 b) to the satisfaction of the Authorized Person within 90 days of receipt of the notice pursuant to Section 16.10 b), any security paid by the Permittee under this Bylaw shall be forfeited to the City and may be used by the City to cure the deficiencies. If the security is insufficient to cover the City's actual cost of fulfilling the requirements, or curing the deficiencies, the City may fulfill the requirements or cure the deficiencies at the expense of the Permittee and recover the costs incurred from the Permittee as a debt.

**16.12** Section 16 of this Bylaw does not apply when the Applicant for a Long Term Permit or Short Term Permit is the City.

## **17. FEES**

The fees and charges levied in this Bylaw are set out in the "City of Prince George Comprehensive Fees and Charges Bylaw No. 7557, 2004".

## **18. INSPECTION, ASSESSMENT AND ENFORCEMENT**

**18.1** The Authorized Person and bylaw enforcement officers of the City may, for the purposes of administering or enforcing the provisions of this Bylaw, enter upon the land:

- a) which is identified in an application for designation as a Designated Soil Removal or Deposit Area, or in an application for a Long Term Permit or Short Term Permit, or is the land identified in an issued Long Term Permit or Short Term Permit, at all reasonable times and inspect the property and all aspects of Removal or Deposit, and Removal or Deposit Operations.
- b) which is under suspicion of being the location of activities contrary to this Bylaw.

**18.2** No person shall interfere with or obstruct the entry of the Authorized Person or bylaw enforcement officers on to any land to which entry is made or attempted for the purposes of administering or enforcing the provisions of this Bylaw.

## **19. OFFENCE AND PENALTY**

**19.1** This Bylaw may be enforced by the *Offence Act*, a Bylaw Notice in accordance with the *Local Government Bylaw Notice Enforcement Act*, or a combination of both methods.

**19.2** A Bylaw Notice may be shall be pursuant to the *Local Government Bylaw Notice Enforcement Act*, the fines specified in Schedule "B" of the "City of Prince George Bylaw Notice Enforcement Bylaw No.8813, 2016", shall apply.

**19.3** Except as otherwise provided in this Bylaw or the "City of Prince George Bylaw Notice Enforcement Bylaw No. 8813, 2016", any person who violates any of the provisions of this Bylaw or who refuses, or omits or neglects to fulfill, observe, carry out or perform any duty or obligation imposed by this Bylaw shall be liable on summary conviction to a fine of not less than Two Thousand Dollars (\$2,000.00) and not exceeding Ten Thousand Dollars (\$10,000.00), the cost of prosecution and any other penalty or order imposed pursuant to the *Community Charter* or the *Offence Act*.

**19.4** Each day on which any violation, contravention or breach of this Bylaw continues shall be deemed a separate offence.

## **20. SCHEDULES**

**20.1** The following list of schedules are attached to this Bylaw and are incorporated in and form part of this Bylaw:

Schedule "A" – Designated Soil Removal or Deposit Area

Schedule "B" – Posting of Notice

Schedule "C" – Organic Matter, Surface Soil and Subsoil Management

Schedule "D" – Dust Management

## **21. SEVERABILITY**

**21.1** If any section, subsection, clause, sub-clause or phrase of this Bylaw is for any reason held to be invalid by the decision of any Court of competent jurisdiction, that section, subsection, clause, sub-clause or phrase shall be struck from this Bylaw and any decision shall not affect the validity of the remaining portions of this Bylaw.

READ A FIRST TIME THE                    **8TH**                    DAY OF                    **APRIL**                    , **2019.**

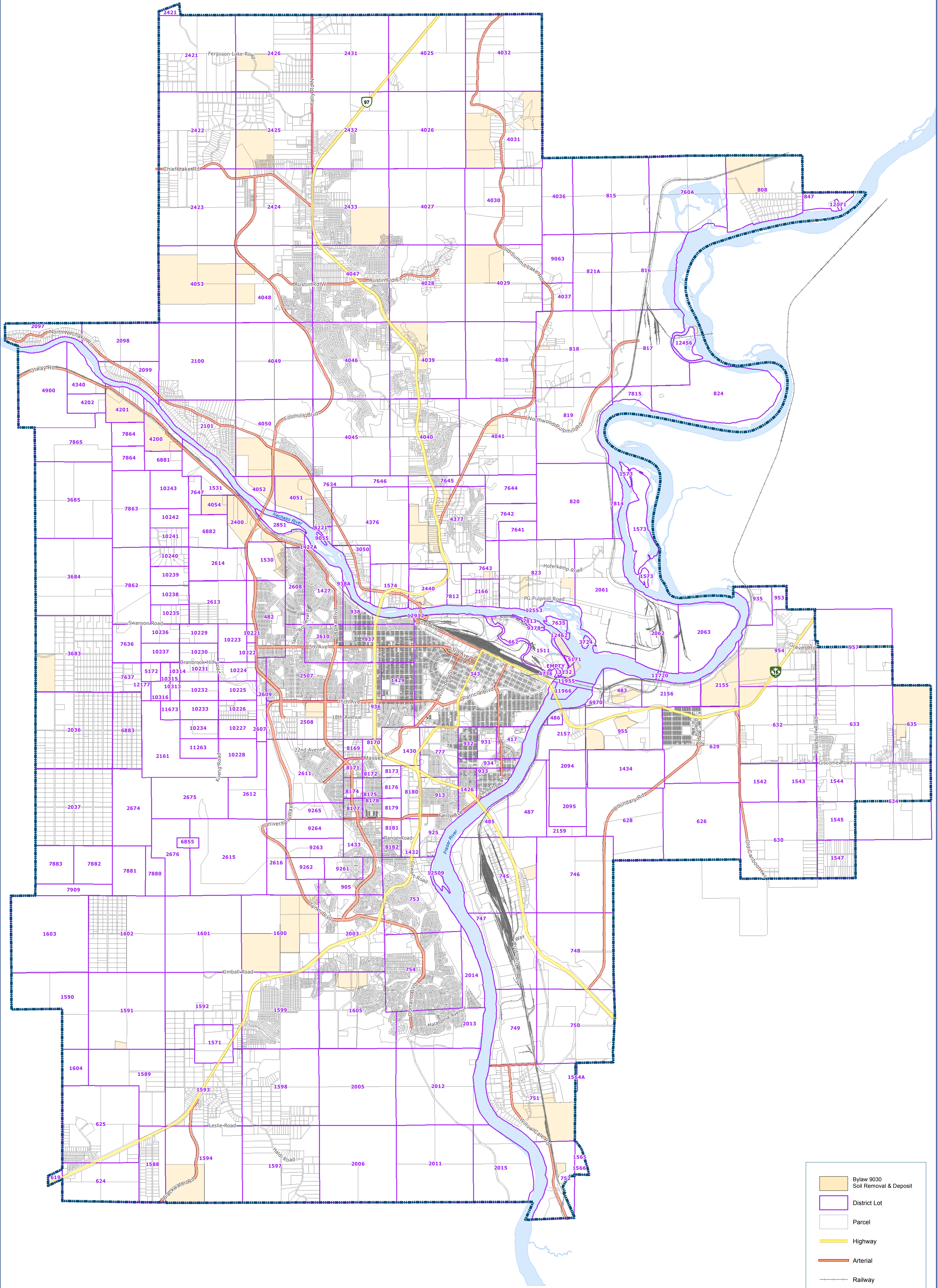
READ A SECOND TIME THE                    **8TH**                    DAY OF                    **APRIL**                    , **2019.**

READ A THIRD TIME THE                    **8TH**                    DAY OF                    **APRIL**                    , **2019.**

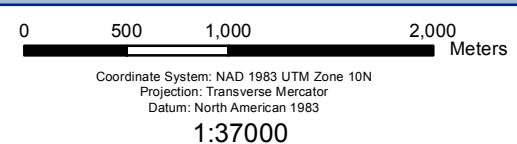
ADOPTED THIS THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 2019 BY A \_\_\_\_\_ DECISION OF  
ALL MEMBERS OF CITY COUNCIL PRESENT AND ELIGIBLE TO VOTE.

\_\_\_\_\_  
MAYOR

\_\_\_\_\_  
CORPORATE OFFICER



Amended: Bylaw #8682, 01/04/2016  
Amended: Bylaw #7740, 02/18/2008



Coordinate System: NAD 1983 UTM Zone 10N  
Projection: Mercator  
Datum: North American 1983  
1:37000

# Schedule "A" to Soil Removal and Deposit Bylaw No. 9030, 2019



## Schedule "B" – Posting of Notice

### 1. General

When the posting of notice is required by this Bylaw the Applicant shall, at the Applicant's expense, post the notice in accordance with this Schedule "B".

### 2. Size and Material

- a) The notice shall be a minimum of 1.8 metres X 1.2 metres in dimension.
- b) The notice shall be constructed of 1.3 cm plywood or other durable material.

### 3. Content

3.1 The notice shall be in English and state the following, as applicable to the application:

- a) time and date of the Hearing;
- b) place of the Hearing;
- c) in general terms a brief description of the Soil Removal Designation application and the estimated volume in cubic metres of Soil to be Removed from or Deposited on the Land in total;
- d) legal description of the parcel;
- e) the Applicant's name, address, and phone number; and
- f) the City's, address and phone number.

3.2 The notice shall have:

- a) a white background;
- b) dark blue block capital lettering that is not less than 6 cm in height; and
- c) letter headings shall be underlined.

### 4. Number

One notice is required for each 150 metres of Highway frontage, or portion thereof, provided that no more than 3 notices are required for any one parcel.

### 5. Location

5.1 The notice shall be located within 3 metres of the parcel property line, in a conspicuous location facing and clearly visible from the Abutting Highway.

5.2 The notice shall be located so as not to interfere with pedestrian or vehicular traffic flow, or obstruct visibility from a Highway, lane, walkway or driveway.

5.3 If the placement of the notice on the parcel that is the subject of the application is not feasible then the notice may be posted on an Abutting Highway, subject to approval of the Authorized Person.

**6. Installation**

The notice must be installed in a safe, sturdy manner capable of withstanding wind and weather.

**7. Removal**

The Applicant must remove the notice within 3 days of the conclusion of any related public hearing.

**8. Postponement of the Public Hearing**

Failure to post and keep posted the required notice in accordance with this Bylaw may result in the postponement of the Hearing. Any notification costs incurred by the City as a result of such postponement shall be the responsibility of the Applicant in accordance with the City of Prince George Comprehensive Fees and Charges Bylaw.

**9. Statutory Declaration Required**

The Applicant must provide the Authorized Person with a statutory declaration, in an approved format, that indicates all notices have been posted as required by this Bylaw.



## Schedule “C” – Organic Matter, Surface Soil and Subsoil Management

Schedule “C” is a set of requirements for the collection and storage of organic matter, surface Soils and subsoils at the location of Soil Removal and Deposit Operations with the long-term objective of saving the Soil material necessary to reclaim the site back to a productive ecosystem. The requirements are grouped into two categories:

1. Site Preparation – the collection of organic matter, surface Soil, and subsoil
2. Site Rehabilitation – the replacement of ameliorated surface Soil and subsoil

### 1. Site Preparation

- a) Other than merchantable timber, all woody debris, including non-merchantable timber, slash, branches, shrubs, roots and stumps shall be collected and chipped, ground or mulched on site.
- b) The organic layer, including existing ground cover and decaying vegetative matter, shall be stripped and collected on site.
- c) The wood chips, grindings or mulch shall be blended with the collected organic layer and stored in static, three-sided triangular piles with a maximum slope of 2:1 for a minimum period of one year for composting. Compost piles should be stored a minimum of 10 metres away from any forested area. Subsequent to the one year composting period, this organic material can be shaped into a Berm or other Stockpile form provided that it is identifiable from other Soil materials.
- d) All Soil material with a texture of sandy loam or finer occurring within the approximate upper 30 centimetres of native Soil below the organic layer is to be removed and stockpiled. Stockpiling can occur in the form of Berms. This material will be referred to as surface Soil and generally consists of both the A and B Soil horizons.
- e) All other Soil material with a texture of sand or finer down to gravel contact or overburden must be removed and stockpiled separately. Stockpiling can occur in the form of Berms. This material will be referred to in this Schedule “C” as subsoil.
- f) Stockpiles of organic matter, surface Soil and subsoil are to be located well away from areas which are to be excavated and at no time are Stockpiles to be located within 10 meters of any open gravel faces or actively mined areas.

- g) Stockpiled surface Soil and subsoil are to be fertilized and seeded with grass as a measure of Weed and erosion control.

## **2. Site Rehabilitation**

- a) Site rehabilitation and surface Soil and subsoil replacement shall not to be carried out during periods of high Soil moisture content or during periods of high precipitation in order to avoid Soil compaction and degradation.
- b) Upon completion of all excavation face sloping and prior to any surface Soil or subsoil replacement, the pit floor shall be chisel plowed to a minimum depth of 60 cm in two directions at right angles. The chisel shank spacing shall not be greater than 60 cm.
- c) The Stockpiled Soil material is to be replaced in the reverse order from which it was removed. The subsoil first and the surface Soil last.
- d) The composted wood chip and organic layer mixture shall be blended with the surface Soil prior to the replacement of the surface Soil.
- e) The pH of the surface Soil mixture shall be assessed by a Qualified Professional and fertilizers and other amendments should be considered in order to promote regeneration.

## Schedule “D” – Dust Management

Schedule “D” is a set of prescriptive guidelines for the management of point source and non-point sources of dust generation at Soil Removal and Deposit Operation sites. The objective of these guidelines is to provide direction for the development of dust management strategies as required in Sections 9.7 a) ii, and 12.1 e) of the Soil Removal and Deposit Bylaw No. 9030, 2019.

Dust control practices for Soil Removal and Deposit Operations should include:

- a) measures for crushing and screening operations to prevent or minimize dust generation and prevent the escape of dust emissions from these point sources;
- b) measures for any and all haul routes to minimize dust generation including asphalt surfacing or the continuous application of dust suppressant;
- c) measures for any and all vehicle access and egress points to Soil Removal and Deposit Operations including asphalt surfacing, truck wheel washes, cattle guards and the continuous application of dust suppressant;
- d) measures to prevent or minimize Fugitive Dust emissions from non-point sources including exposed excavation areas, loading and unloading areas, and Stockpiles;
- e) continuous application of dust suppressant on all areas where vehicle and equipment maneuvering is expected on Soil Removal and Deposit Operations sites;
- f) measures to ensure that trucks transporting Soil on and off site are not overloaded, are securely tarped, and are free of unsecured Soil in order to prevent the tracking of debris onto public roadways;
- g) the establishment and maintenance of dense vegetative screening near sources of dust generation and at the perimeter of Soil Removal and Deposit Operations;
- h) Reclamation in a phased and timely fashion.

## APPENDIX C

### Saint John and Edmonton Zoning Bylaw Excerpts

### City of Edmonton Zoning Bylaw (2017)

56. Excavation, Stripping and Grading Bylaw 17422 November 16, 2015 Effective Date: December 1, 2015

1. For the purpose of this Section, excavation shall mean excavation other than for construction or building purposes, including but not limited to, sand and gravel mining, top soil stripping, and construction of artificial bodies of water. Bylaw 17831 November 28, 2016

2. A person wishing to undertake Site excavation, stripping, or grading of land shall provide the following details in the application for a Development Permit:

- a. the location and area of the Site on which the excavation, stripping or grading is to take place;
- b. the existing land Use and vegetation;
- c. the type and dimensions of the excavation to be made, and the effect on existing drainage patterns; and
- d. the condition in which the excavation is to be left when the operations are complete, or the final disposition to be made of the area from which the topsoil is to be removed, including the action that is to be taken for restoring the condition of the surface of the land to be affected, for preventing, controlling or lessening the creation of erosion or dust from the land, and for preventing any siltation or erosion into any surrounding water courses.

3. The Development Officer shall consider every application for a Permit to excavate land, and shall not issue a Permit unless they are satisfied that:

- a. the operation shall be carried out so as to create a minimum of dust and environmental disturbance;
- b. the operation is one that, in the opinion of the Development Officer, is reasonably necessary for the Use and development of the land in question, considering the need for preservation of prime agricultural land, the need for natural preservation, and the future need for soil on the site;
- c. the operation shall not destroy, disturb, or alter any historical resource designated in accordance with the Alberta Historical Resources Act; and
- d. the operation shall not sterilize the Site for future development.

4. The Development Officer may require, as a condition of issuing a permit to excavate land, that the applicant take the precautions and follow the methods prescribed by the Development Officer for the prevention or control of dust or any other nuisance caused by the proposed operation, and for the reclamation of the Site if required. Bylaw 16032 March 12, 2012

5. A person who reclaims a Site must obtain a letter of completion from Transportation Services.

### City of Saint John Zoning Bylaw (2016)

#### 9.7(2) EXCAVATING OF LAND

(a) Except as otherwise provided by this By-law, no excavating of land greater than one metre in depth may occur in any zone except where the excavating of land has a cumulative ground area not greater than 62.5 square metres.

(b) The excavating of land greater than one metre in depth which exceeds a maximum cumulative ground area of 62.5 square metres may occur in any zone subject to the following requirements:

(i) The excavating of land does not involve a cumulative ground area greater than 500 square metres;

(ii) The excavating of land ceases on or before 365 days after the date in which the development is approved by the Development Officer regardless of whether the excavating of land was continuous or not;

(iii) The land affected will not contain a slope steeper than two metres horizontal to one metre vertical when the excavating of land ceases on or before 365 days after the date in which the development is approved by the Development Officer;

(iv) The land affected is landscaped on or before 365 days after the date in which the development is approved by the Development Officer as follows: (A) A layer of topsoil having a minimum depth of 10 centimetres after compaction completely covering the surface of the land affected by the excavating of land; and

(B) Hydro seed or sod is placed completely over the surface of the land affected by the excavating of land; and

(v) The Development Officer has indicated approval of the filling of land in the form of a development permit.

(c) Notwithstanding anything else in this subsection, the excavating of land greater than one metre in depth in any zone may be undertaken directly in connection with one or more of the following:

(i) The construction, alteration, or repair of a street in an approved subdivision or under contract awarded by The City of Saint John;

(ii) Any work performed by a public utility; or

(iii) The construction of a basement or cellar, footing of a building or structure, swimming pool, or other such development authorized by a permit issued by The City of Saint John.

## APPENDIX D

### Saint John, NB Pit and Quarry Zone Excerpt



## 12.4 Pit and Quarry (PQ) Zone

### Municipal Plan Context



The Pit and Quarry (PQ) zone accommodates resource extraction activities. These uses may include excavation of sand, gravel, clay, shale, limestone, or other aggregate deposits. Rehabilitation of these sites is a requirement of this zone.



Pit or quarry operations are not considered permanent uses and these properties are intended to be rezoned back to an appropriate zone once a pit or quarry has been exhausted and rehabilitated.

The Pit and Quarry (PQ) zone is mainly intended for land outside of the Primary Development Area that is designated Rural Resource Area. However, land in other appropriate designations could be zoned PQ.

### 12.4(1) Permitted Uses

Any land, building, or structure may be used for the purposes of, and for no other purpose than, the following:

- Excavation of sand, gravel, clay, shale, limestone, or other deposits;
- Pit;
- Quarry;
- Topsoil Removal;
- The *existing* use described in Schedule E: Exceptions, of each lot respectively, identified therein as being located in the PQ zone.

The above main uses may also include any of the following as an accessory or secondary use:

- Caretaker Dwelling;
- Crushing and Washing of Aggregates;
- Office and Storage Buildings;
- Parking and Storage of Trucks and Heavy Equipment;
- Screening of Aggregates;
- Storage of Aggregates, Topsoil, and Overburden;
- Weigh Scales.



## 12.4(2) Prohibition of Excavation

Any excavation permitted in subsection 12.4(1) undertaken for the purposes of sale or other commercial use is prohibited until a development permit in accordance with subsection 12.4(8) has been obtained. [2016, C.P. 111-35]

## 12.4(3) Zone Standards: Setbacks

- (a) Subject to paragraph 12.4(4)(c), the minimum distances stipulated herein shall be maintained between any excavation upon land with respect to which a development permit has been issued and the following: [2016, C.P. 111-35]

		<b>Minimum Distance From a Quarry</b>	<b>Minimum Distance From a Pit</b>	<b>Minimum Distance From a Crusher</b>
(i)	Public Water Supply	600 metres	150 metres	150 metres
(ii)	Residentially zoned lot or dwelling present at the time of the application to rezone for a pit or quarry	200 metres	150 metres	200 metres
(iii)	Public Street	30 metres	30 metres	30 metres
(iv)	Lot Line of the Excavation Site	30 metres	30 metres	30 metres
(v)	Other zones	50 metres	30 metres	50 metres

- (b) No building, structure, or storage or repair area in connection with the excavation may be located within 30 metres in the case of a gravel pit, or 50 metres in the case of a quarry, of a public street or an adjacent zone other than an IL zone, IM zone, IH zone, or PQ zone.
- (c) Notwithstanding subparagraph (a)(iii), no excavation shall take place within seven and one-half (7.5) metres at the ground line of the poles of a power transmission line tower, with a slope of not less than one and one-half (1½) metres horizontal to one (1) metre vertical away there from.

## 12.4(4) Zone Standards: Access

- (a) Every private access shall be located a minimum of 30 metres from the lot lines of the pit or quarry.





- (b) Every private access shall be paved for the first 30 metres from its intersection with a public street.
- (c) Where one or more residential dwellings are present within 150 metres of the private access, that portion of the private access shall be paved unless:
  - (i) The dwelling or dwellings are owned by the owner of the pit or quarry served by the said private access; or
  - (ii) There exists either a natural treed screen having a minimum depth of 30 metres and a minimum height of 4 metres or a natural topographic feature having a minimum of 4 metres in height or a man-made landscaped berm having a minimum height of 4 metres located between the said private access and the said residential dwelling or dwellings extending 25 metres further on either side.
- (d) Every private access created subsequent to the coming into force of this subsection and which has a length greater than 50 metres shall be constructed in a curved fashion to prevent direct visibility of the excavation site and operation from the public street at its intersection with the private access.
- (e) Every private access to a pit or quarry shall have a gate at the entrance within 20 metres of the public street. The gate shall be locked when the pit or quarry is not actively in operation.

#### **12.4(5) Zone Standards: Hours of Operation**

Excavation of land and related activities involving the use of heavy equipment and crushing equipment shall only be carried on between the hours of 7:00 o'clock in the forenoon and 8:00 o'clock in the afternoon of each day, except on holidays as defined in the Provincial Interpretation Act when no excavation of land is permitted.

#### **12.4(6) Zone Standards: Screening**

- (a) A treed buffer at a minimum of 30 metres in depth and a minimum of 4 metres in height or a topographic feature a minimum of 4 metres in height shall surround the excavation site with the exception of an area for an approved access. If trees do not exist in quantities to adequately screen the visibility of the operation from a public street or adjacent residential properties, the applicant shall construct a treed and landscaped berm 4 metres in height to visually screen the excavation site and associated activities.
- (b) The location of buffers, present or proposed, shall be identified on the applicant's site plan(s) and the treed buffer(s) shall be in place prior to the start of excavation of the



aggregate resource. On-site material may be used for constructing buffers and berms.

#### **12.4(7) Site Rehabilitation**

The land with respect to which a development permit has been issued shall be rehabilitated in a progressive manner in accordance with subsection 12.4(11). [2016, C.P. 111-35]

#### **12.4(8) Development Permit Application**

A person seeking to obtain a development permit shall be the owner or agent of the land proposed to be excavated and shall make application in writing to the Development Officer in a form prescribed by the Development Officer and such application signed by the applicant shall: [2016, C.P. 111-35]

- (a) Record the name and address of the applicant and the location of the proposed excavation;
- (b) Contain a statement indicating the purpose of the work to be carried on and the portion of land where excavation will commence or is in progress, the order of sequence for excavating the balance of the land and the intended use of the land after excavation has ceased;
- (c) Contain a statement of the estimated volume of material in cubic metres proposed to be excavated during the term of the development permit; [2016, C.P. 111-35]
- (d) Include the owners express consent to the entry upon the land which is the subject of the application by The City of Saint John and anyone authorized by it including its servants, agents, employees, and workmen, whether by foot or by vehicle, together with the equipment to be used for the purpose of rehabilitating that land in accordance with the provisions of this By-law in the event the owner has failed to do so within the time limits stipulated herein;
- (e) State the estimated dates of commencement and duration of the excavation;
- (f) Indicate the probable maximum depths and maximum slopes of the proposed excavation at the end of the term of the development permit for which the application is made; [2016, C.P. 111-35]
- (g) Indicate the ultimate depth, elevations, and grades of the excavation shall be subject to any applicable requirements of the Development Officer for future streets and municipal water and municipal sanitary sewer lines; [2016, C.P. 111-35]
- (h) Set out the controls and methods to be employed in preventing the emission of smoke, dust, odours, toxic materials, vibrations, and noise including:



- (i) All blasting to be monitored to ensure compliance by a professional engineer;
  - (ii) All blasting to be designed, loaded, supervised, and initiated by a Category I blaster as certified under the “Apprenticeship and Occupational Certification Act”;
  - (iii) All blasting operations to conform to the latest version of the “General Regulation – Occupational Health and Safety Act” with particular attention to Parts “XII-Explosives” and “XIV-Pits and Quarries;”
- (i) Include one or more plans drawn to a scale of not less than 1 to 1000 by a professional engineer, landscape architect, planner, or land surveyor. These plan(s) shall show the phased development of a pit or quarry for a period of 1 to 5 years and shall indicate the following: [2016, C.P. 111-35]
- (i) The boundaries of the property with respect to which the application is made, and its relation to current streets and other properties;
  - (ii) Current topography at no more than 2 metre contour intervals, or spot elevations or cross sections with a vertical scale of 1 to 100, or a combination thereof, where 2 metre contour intervals are not available;
  - (iii) Location of present natural watercourses and drainage areas as at the seasonal spring peak flow period;
  - (iv) Location of present power transmission line towers and other structures;
  - (v) An outline of the area to be excavated;
  - (vi) The location of proposed watercourses and drainage, including lakes, ponds and retention areas;
  - (vii) The proposed location of any buildings, scale house, equipment, equipment storage area, and equipment repair sheds or areas;
  - (viii) The location of protective fencing if required by the Development Officer; [2016, C.P. 111-35]
  - (ix) The location of entrances and exits to the site of the proposed excavation and gates, if any;
  - (x) The location of traffic routes to and from the area to be excavated;
  - (xi) The location and size of signs erected or proposed to be erected within the site of the proposed excavation and gates, if any;
  - (xii) The depth of the current water table;



- (xiii) The method of achieving a closed loop drainage system at the excavation area, but if a closed loop system cannot be achieved, illustrate on the site plan(s) and have evidence that the Provincial or Federal approval authority has approved an alternative drainage system;
  - (xiv) The location of a present or proposed water source for use in dust control measures subject to paragraph 12.4(10)(f);
  - (xv) The location of storage area(s) for hazardous materials ; [2016, C.P. 111-35]
  - (xvi) The location of storage areas for explosive materials;
  - (xvii) The location of proposed treed berms and natural treed buffers to be retained for screening;
  - (xviii) The location of storage areas for topsoil and overburden to be used in rehabilitation;
- (j) Where the application is for a development permit relating to a pit or quarry proposed to be opened subsequent to the coming into force of this subsection, a statement from a professional engineer or hydrologist identifying the depth of the current water table at the location of the proposed excavation, as well as their opinion respecting the effect, if any, of the proposed excavation upon that water table level on adjacent properties not owned by the applicant; [2016, C.P. 111-35]
- (k) Where an application for a development permit relating to an current pit or quarry site proposes to increase the depth of excavation on that site, a statement from a professional engineer or hydrologist identifying the depth of the current water table at the location of the proposed excavation, as well as their opinion respecting the effect, if any, of the proposed excavation upon that water table level; [2016, C.P. 111-35]
- (l) An application for a development permit shall be accompanied by one or more plans, other than those mentioned in paragraph (i) drawn to a scale by the professionals mentioned in that paragraph, indicating the proposed method of rehabilitation of the excavation area according to the provisions of this By-law and setting out: [2016, C.P. 111-35]
- (i) The proposed grading at not more than 2 metre contour intervals or by cross-sections with a horizontal scale of 1 to 1000 and a vertical scale of 1 to 100 or any combination of these including the slopes for the end of the term for which the development permit is being sought; [2016, C.P. 111-35]
  - (ii) The location, quantity and type of trees, planting, hydro-seeding, or other ground cover materials to be used including the type and depth of soil to be used on the berms for the purposes of establishing vegetation;



- (iii) Details of all items and features pertaining to improvement and preservation of the land, including any retaining wall;
  - (iv) The estimated dates of commencement and completion of such rehabilitation, the portion of land on which it will commence and the order and the time schedule for rehabilitation of the balance of the site; and
- (m) Each application for a permit shall be accompanied by a fee of one thousand and one hundred dollars.

#### **12.4(9) Development Permit**

- (a) Subject to paragraph (c), the Development Officer shall issue a development permit where: [2016, C.P. 111-35]
- (i) An application under this section has been received; and
  - (ii) The applicant has deposited with the Development Officer security in accordance with paragraph (e) satisfactory to the Development Officer and; [2016, C.P. 111-35]
  - (iii) The proposed excavation and rehabilitation of the land for which a development permit has been sought has been approved by the Development Officer as conforming with all requirements of this By-law; and [2016, C.P. 111-35]
  - (iv) The fee set out in paragraph 12.4(8)(m) has been paid.
- (b) A development permit is valid from the date of its issuance until the earlier of: [2016, C.P. 111-35]
- (i) December 31st of the same year; or
  - (ii) The date of the registration in the Saint John County Registry Office of a deed conveying title to the land in question from the applicant.
  - (iii) In the event a development permit terminates due to the conveyance of the land in question, the Development Officer shall issue, without fee, a new excavation permit for the remainder of the calendar year if the new owner delivers to the Development Officer: [2016, C.P. 111-35]
    - (A) Security in accordance with the requirements of paragraph (e); and
    - (B) A written statement that in consideration of the Development Officer issuing a development permit the new owner consents to the entry upon the land in question by The City of Saint John and anyone authorized by it, including its servants, agents, employees, and



workmen, whether by foot or by vehicle, together with the equipment to be used for the purpose of rehabilitating that land in accordance with the provisions of this section in the event the owner has failed to do so within the time limit stipulated herein. [2016, C.P. 111-35]

- (c) A development permit shall: [2016, C.P. 111-35]
  - (i) Be in the form prescribed by the Development Officer; [2016, C.P. 111-35]
  - (ii) Be signed by the Development Officer; [2016, C.P. 111-35]
  - (iii) Indicate the purpose of the work to be carried on; and
  - (iv) Set out any controls or measures, which in the opinion of the Development Officer, shall be employed in the operation, including any conditions that may have been imposed by Council upon the rezoning of the site. [2016, C.P. 111-35]
- (d) No development permit may be issued under paragraph (b) if: [2016, C.P. 111-35]
  - (i) The proposed work would:
    - (A) Create a hazard to human life;
    - (B) Endanger adjoining property;
    - (C) Adversely affect a municipal sanitary sewer, municipal water main, watercourse, or street; or [2016, C.P. 111-35]
    - (D) Not meet the conditions of use set out in the zones that permit the excavation use.
  - (ii) The land of the site is subject to geological instability or flood hazards to the extent that, in the opinion of the Development Officer, no reasonable amount of corrective work could eliminate or sufficiently reduce the instability or hazard. [2016, C.P. 111-35]
- (e) No development permit may be issued under paragraph (b) until the applicant has deposited a security in the form of money, letter of credit, or a bond in favour of The City of Saint John, in an amount determined by the Development Officer to be adequate to cover the estimated cost of rehabilitation of the land of the site in accordance with the terms and time limits stipulated herein. [2016, C.P. 111-35]



## 12.4(10) Development Permit Conditions

A development permit under subsection 12.4(9) is subject to the following terms and conditions: [2016, C.P. 111-35]

(a) Size of the Actively Excavated Area:

The actively excavated area(s) of a pit shall not exceed a cumulative ground area of 5 hectares at any time. For greater certainty, an actively excavated area(s) does not include an area of the site dedicated to an accessory or secondary use permitted in the Pit and Quarry zone.

(b) Slope of Working Face:

- (i) The slope of the working face of the excavation, other than in a quarry, must not be steeper than one and one-quarter ( $1\frac{1}{4}$ ) metres horizontal to one (1) metre vertical for the full depth of the excavation;
- (ii) Subject to paragraph (c), quarries are permitted to have a vertical working face;
- (iii) Any land which extends, projects or juts over or beyond the top, working face of the excavation shall be knocked down and left in such condition at the end of each working shift so as to prevent the danger of a fall by natural or other causes;
- (iv) Where an occasional operating condition results in a working face having a slope steeper than the one and one-quarter ( $1\frac{1}{4}$ ) metre horizontal to one (1) metre vertical prescribed under subparagraph (i), the owner of the land being excavated shall bring or have the slope brought to at least that prescribed within forty-eight (48) hours after notice to that effect from the Development Officer. [2016, C.P. 111-35]

(c) Protection at Vertical Slopes:

- (i) Where the slope of the working face of a quarry is steeper than 1:1 (vertical: horizontal) and the vertical height of the working face is greater than 3 metres, a combination of boulders and signage spaced along the perimeter of the slope will be required. The boulders shall be no smaller than 1 metre in size and spaced at maximum intervals of 2 metres. Signage warning of the danger shall be placed at 15 metre intervals; and
- (ii) Fencing may be required for all or a portion of the site if in the opinion of the Development Officer there is a greater chance that public safety is at risk. [2016, C.P. 111-35]



(d) Access:

Every private access serving a new or *existing* pit or quarry shall be maintained in a reasonably dust free condition by paving, watering, or use of calcium chloride and areas that are paved shall remain in a reasonably dust-free condition.

(e) Water Table:

No excavation shall take place in a pit or quarry to lower the water table on land adjacent to that for which a development permit has been issued. The ultimate depth of the excavation shall be able to sustain the intended long-term uses of the land as indicated. [2016, C.P. 111-35]

(f) Water Source:

Every new or expanding pit or quarry must have an available natural or fabricated source of water on-site sufficient to meet the requirements of the Provincial Clean Environment Act before excavation can take place.

(g) Site Drainage:

All pits or quarries shall operate with a closed loop drainage system allowing no water to leave the un-rehabilitated portion of the excavation area, or in accordance with a drainage plan approved by the Provincial Department of the Environment and Federal Department of Fisheries and Oceans.

(h) Property Lines:

The owner shall have the lot lines staked or marked as required by the Development Officer. The owner shall, if requested by the Development Officer, provide one or more reference benchmarks. [2016, C.P. 111-35]

(i) Topsoil Removal:

Topsoil stripped from the site shall be stockpiled on-site in sufficient quantities for use as an organic material to provide for the complete re-vegetation of the disturbed areas of the site, but not including access roads. Removal of topsoil shall not extend beyond the excavation area as approved for the current year of the development permit. [2016, C.P. 111-35]

(j) Tree Cutting:

Tree cutting or the removal of other vegetation is not permitted to extend any further than the excavation area for the current year of the development permit, except as necessary for an approved access road, as illustrated on the approved site plan. [2016, C.P. 111-35]





## 12.4(11) Site Rehabilitation

- (a) The owner of the land must commence the rehabilitation of the excavation area not later than six months after the earlier of any one of the following situations arising:
  - (i) The excavation or any portion thereof has reached its maximum allowable depth as well the minimum setback requirements set out in sections 12.4(3) and 12.4(10); or
  - (ii) The abandonment of the pit or quarry. A pit or quarry is hereby deemed to have been abandoned when four (4) months pass following the date a development permit for the land was last valid; [2016, C.P. 111-35]
  - (iii) The section of the excavation site is not required for other purposes related to the operation;
  - (iv) The obligation to commence rehabilitation hereunder arises as often as any of the situations identified in paragraph (a) occur with respect to the land for which a development permit has been issued. [2016, C.P. 111-35]
- (b) Every portion of the excavation area disturbed for the purposes of excavation or associated activities, with the exception of the access road, shall be cleared of debris, sloped in accordance with this By-law, and vegetation established in accordance with the New Brunswick Department of Transportation's specifications for hydro seeding. Exposed rock outcrops shall be considered natural features and shall not be required to be vegetated.
- (c) In the case of a gravel pit, the slope of the working face of the excavation shall be rehabilitated so that it is not steeper than three (3) metres horizontal to one (1) metre vertical for any portion of the depth of the excavation and be hydro-seeded where appropriate.
- (d) In the case of a quarry the working face of the excavation shall be rehabilitated so that it is stepped with a vertical rise of not greater than 10 metres meeting a horizontal plateau of not less than 3 metres in width. The horizontal plateaus shall have vegetation established where possible in the opinion of the Development Officer. A consistent slope of no less than (2) metres horizontal to (1) metre vertical also permitted. [2016, C.P. 111-35]
- (e) The top of the rehabilitated slope of an excavation must not be located within the applicable minimum setback requirements as set out in subsection 12.3(3).
- (f) When any one of the situations described in paragraph (a) arises, all equipment, buildings, and structures upon the land to which the development permit applies, and associated directly or indirectly with excavation other than fences required under paragraph 12.4(10)(c) shall be removed and all stockpiles, sand, gravel, stone, rock,



clay, or similar material shall be removed or utilized in the rehabilitation of the land.  
[2016, C.P. 111-35]

- (g) Adequate measures shall be taken to prevent surface water from damaging the face of the excavation or fill by the provision of berms, swales, or other measures that satisfactorily resolve the problem.
- (h) Where a holder of a development permit fails to rehabilitate the excavation area in the manner and within the time limits required hereby, the Council may cause the required work to be done and to be paid for from the security deposit. [2016, C.P. 111-35]
- (i) The rehabilitation required hereby shall be completed no later than 12 months following the deadline for the commencement of rehabilitation established herein.
- (j) Rehabilitation of the portions identified in paragraph (a) shall be completed no later than one year following its commencement.

#### **12.4(12) Enforcement**

In the event of a contravention or failure to comply with any provision of this section, the Development Officer may suspend, or in the case of a continued violation, revoke, the development permit, in writing, to be delivered by hand or by registered mail to the owner, and may, if the conditions leading to the suspension are subsequently corrected, reinstate the suspended development permit or issue a development permit if the conditions are corrected and all the requirements for the issuance of a development permit have been satisfactorily met. Council may cause any work to be done and to be paid for from the security deposit.  
[2016, C.P. 111-35]