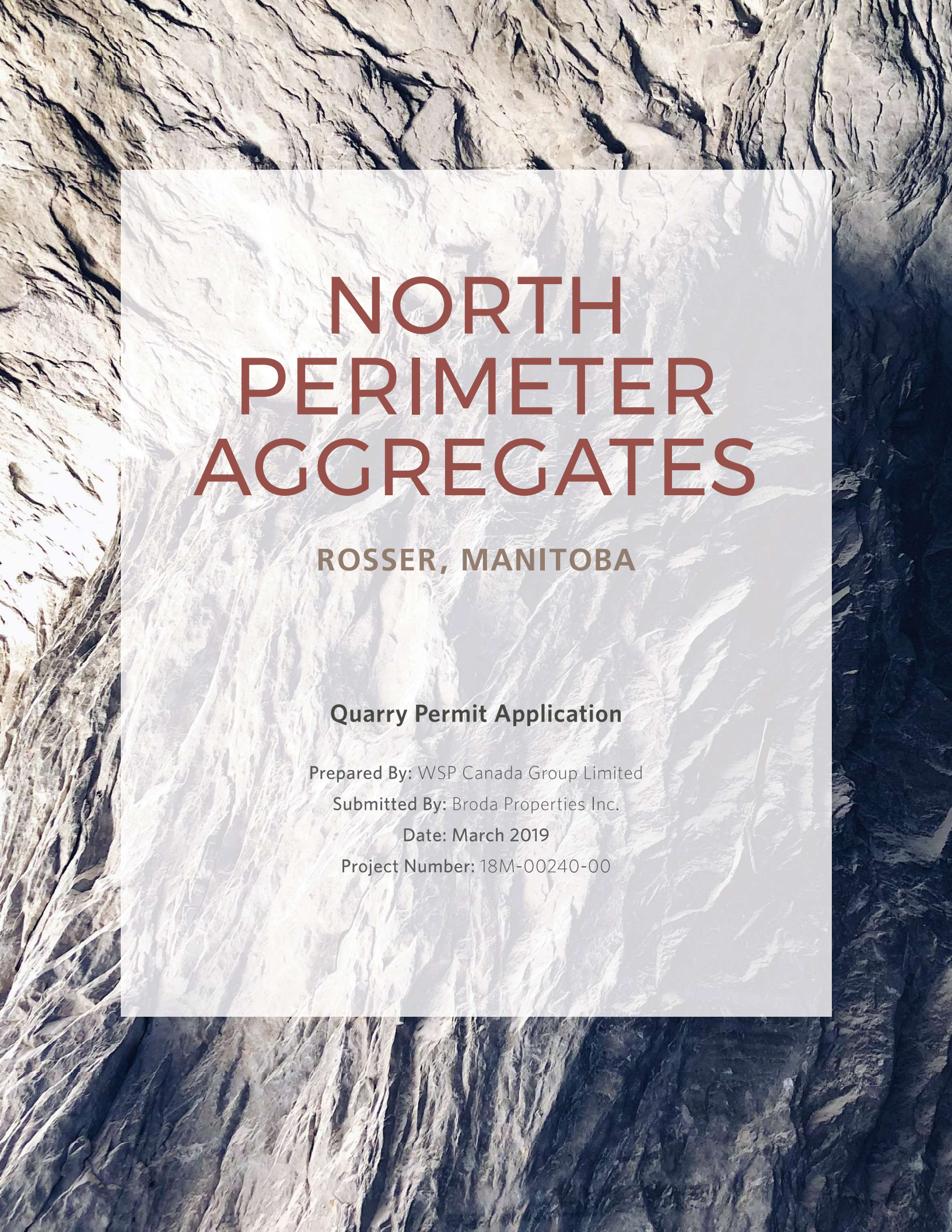

NORTH PERIMETER AGGREGATES

ROSSER, MANITOBA

Quarry Permit Application

Prepared By: WSP Canada Group Limited

Submitted By: Broda Properties Inc.

Date: March 2019

Project Number: 18M-00240-00

Meagan Boles
Senior Planner
WSP Canada Group Limited
111-93 Lombard Avenue
Winnipeg MB R3B 3B1
meagan.boles@wsp.com

April 1, 2019

Confidential

Mr. Larry Wandowich
Chief Administrative Officer
RM of Rosser
Box 131
Rosser MB R0H 0E0
cao@rmofrosser.com

Dear Mr. Wandowich:

Subject: North Perimeter Aggregates Quarry Permit Application

Please find enclosed a Quarry Permit Application for lands located on part of Section 4-12-2 EPM and part of Section 33-11-2 EPM in the Rural Municipality (RM) of Rosser. The applicant, Broda Properties Inc., owns all lands pertaining to the Quarry, which will be operated by North Perimeter Aggregates Inc., on behalf of Broda Properties Inc.

With the knowledge and expertise of a wide range of skilled professionals, the application contained herein is in direct accordance with the provisions of Schedule 'A' of the RM of Rosser's Quarry Operations By-law No. 8-15.

If you have any questions regarding the enclosed application or the accompanying reports, please do not hesitate to contact the undersigned at your convenience.

Regards,

Meagan Boles
Senior Planner
WSP Canada Group Limited

North Perimeter Aggregates Quarry Permit Application
Executive Summary

On behalf of Broda Properties Inc., WSP Canada Group Ltd. (WSP) is submitting the following *Quarry Permit Application* to establish the North Perimeter Aggregates Quarry in the Rural Municipality of Rosser (RM) on lands located in part of Section 4-12-2 EPM and part of Section 33-11-2 EPM within the Inland Port Special Planning Area (SPA). All lands pertaining to the application are held by Broda Properties Inc.

The subject lands are generally bordered by the Perimeter Highway (PTH 101) to the north; Klimpke Road to the east; Farmer Road to the south; and Sturgeon Road to the west, with Mollard Road running east-west through the site. The subject site is flat and currently agricultural in nature, with the exception of three farmsteads and an abandoned farmstead. The farmsteads are all owned by Broda Properties Inc. and the residences on site are currently rental properties. There are two proposed accesses into the site, both from Mollard Road. Existing accesses from Klimpke Road will be closed to help mitigate the impact of quarry traffic on nearby residences to the east. The site and operation plan has also been designed to accommodate the proposed future extension of CentrePort Canada Way from Jefferson Avenue to Klimpke Road, near the southeast corner of the site.

Two Manitoba Hydro transmission rights-of-way bisect the property. Manitoba Hydro may need to impose certain restrictions on the design and operation of the proposed quarry development to protect current and future operations within the right-of-ways. The intent of any restrictions would be maintaining public safety, operational accessibility, and structural integrity of the transmission infrastructure. The quarry lands located to the north of the northern Manitoba Hydro transmission right-of-way will not be used for quarry activities, which will help to mitigate any impacts of the quarry operation on residences and businesses located to the north of PTH 101.

Neighbouring land uses include agricultural, rural residential, and highway commercial. The Quarry Minerals Regulation 65/92 under *The Mines and Minerals Act* prohibits aggregate extraction 400 metres from a residential dwelling. Due to this requirement, no aggregate extraction will occur within a 400-metre setback distance from each of the neighbouring residences. At peak production, the quarry will encompass approximately 589 acres of the site. If granted approval, the quarry will commence operations in 2020, with an anticipated closing date of 2035. The quarry will typically operate Monday to Friday from 7:00 – 18:00 and Saturday from 9:00 – 12:00.

The subject lands are located above a geological formation deemed to be of 'high' quality aggregate, one of the last 'high' quality deposits in Manitoba. Recovering these high-value construction materials can reduce the costs of infrastructure, improving all construction project economics. The site is currently designated part Manufacturing and Logistics and part Service-Oriented Industrial according to the *Inland Port Special Planning Area (SPA) Regulation 49/2016* (Regulation). Section 6 of the Regulation states that where 'high' aggregate resources have been identified, they may be extracted from areas designated as Manufacturing and Logistics in accordance with the Zoning By-law. The property is currently zoned "IPZ" Inland Port Rural Zone and needs to be re-zoned to "I3" Industrial Heavy Zone in order for an aggregate extraction use to be established. Aggregate extraction is a permitted use in the "I3" Industrial Heavy Zone. As such, in conjunction with the enclosed *Quarry Permit Application*, the applicant is also required to submit a zoning amendment request to the SPA.

The *Quarry Permit Application* and the technical reports included herein represent the applicant's commitment to developing and operating a quarry that is in direct accordance with the requirements outlined in 'Schedule A' of the RM of Rosser's Quarry Operations By-law No. 8-15. Each technical report was prepared by an expert in their respective field, many of whom have prepared similar reports for quarry applications across Canada. The following paragraphs provide highlights from each of these reports, including important facts, implications, and mitigation measures. Each highlight is explored in further detail within the body of this application.

BLASTING

- The proposed quarry will be developed in five phases. The methodology selected for extracting the mineral deposit includes stripping of overburden, employing continuous surface miner machine(s), and occasional drilling and blasting, crushing, and loading and hauling of the crushed (finished) material. Approximately 90% of rock extraction will be performed using continuous miner machines equipped with dust suppression systems and 10% will be conducted using drilling and blasting, and only when massive layers of dolomite are encountered.

- The proposed extraction area is mainly surrounded by active farmland with associated residential buildings (sensitive receptors) on all sides (north, south, east, west). It is inherent that extraction limits during all phases of the proposed operations are designed for a minimum standoff distance of 400 metres from the closest residential building (sensitive receptor), on all sides, in accordance with the requirements of *The Manitoba Mines and Minerals Act* (MMMA), Regulation M162-M.R. 65/92, Clause 43(1)(b)(ii).

- There are two sets of power transmission lines running east-west, along Mollard Road and north of Mollard Road. Power lines and supporting towers are considered non-sensitive receptors; however, a setback distance from the power transmission corridors may be required.

- The five phases of the proposed mineral extraction area, within the licensed area, will be reduced allowing for the required setback distances from adjacent properties and sensitive receptors.

- Depth of excavation from rock surface will be approximately 10 metres including sub-drill.

- Blasting can only occur weekdays between 9:00 and 16:00 at a maximum vibration of 12 millimetres/second (mm/sec) Peak Particle Velocity under Provincial regulations.

- The MMMA guideline for blast-induced overpressure monitored at the closest sensitive receptor is a maximum of 130 dB(L). The *Blasting Impact Assessment* presents vibration and noise prediction calculations for various standoff distances. These calculations are based on the worst-case blast parameters scenario and the Manitoba's Quarry Minerals Regulations for vibration and overpressure guideline limits. The resulting calculations indicate that the blasting in all phases of the proposed extraction areas can be carried out safely and well within the MMMA Quarry Reg. M162- M.R. 65/92 Clause 44(1) to 44(3) inclusive.

- All production blasts should be monitored for both vibration and overpressure (noise) levels at two closest receptors with digital seismographs. Compilation of the vibration and overpressure data in the initial phase of extraction can be used to assist in planning for subsequent blasting. This will also allow subsequent blasts to be designed specifically for this location and well within MMMA guidelines and regulations.

- Detailed blast records will be maintained throughout the lifetime of the quarry.

- Blasting procedures such as drilling, and loading will be audited on an occasional basis by an independent blasting consultant to ensure full compliance with governing guidelines and regulations.

- Based on observations and research, the blasting experts have concluded that vibrations produced by the blasting operations proposed at the North Perimeter Aggregates Quarry will not affect the water wells in the area.

- According to the *Blasting Impact Assessment*, the North Perimeter Aggregates Quarry can be developed safely and productively in the proposed licenced area, while staying within the MMMA guidelines and regulations for blasting in mines and quarries.

- The Quarry Operator is committed to following all recommendations included within the *Blasting Impact Assessment*.

SOUND

- The applicable sound level limits, for the purposes of the *Sound Impact Assessment*, were established in accordance with the Manitoba Quarry Minerals Regulation 65/92 (1), which stipulates that sound levels from quarry operations at any seasonal or permanent residence shall not exceed 55 decibels (dBA) during daytime hours (7:00 – 22:00) and 45 dBA during nighttime hours (22:00 – 7:00). Since the North Perimeter Aggregates Quarry will only operate during daytime hours, the sound level limit applicable for this assessment is the daytime criterion of 55 dBA.
- The entire operation is planned to be set back from and north of Mollard Road. This should greatly minimize noise propagation from the site and its operations. Furthermore, potential acoustic impacts should be prevented, minimized, or mitigated by a combination of:
  - Existence of remnant river-bottom forest woodlots and mature residential shelterbelts having significant capacity, especially in spring, summer and fall, to absorb, alter and deflect/reflect sounds emanating from the quarry.
  - Commitment to develop an integrated sound-absorbing/altering/reflecting system of strategically-placed vegetated berms across the few remaining direct pathways for sound propagation from the quarry.
  - Planned placement of most large equipment (and some stockpiles) below grade.
  - The substantial regional background noise in the soundscape emanating consistently from the Perimeter Highway and occasionally from local and regional agricultural, industrial, and commercial activities.
- The predicted maximum sound intensity level of the surface miner machine at the nearest occupied residence is 23 dBA.
- The predicted maximum sound intensity level of a single quarry blast at the nearest occupied residence is 78 dBA.
- At present, the site is within the long-term predicted 25 dBA "Noise Exposure Forecast" area around the Winnipeg James Armstrong Richardson International Airport. This means that the 20-25 dBA sound levels caused by airport operations are already part of the current background sound-level condition in this area. This current ambient soundscape would be expected to completely mask any off-site sound effects of the quarry operations.

VISUAL

- There are three residences located within approximately 850 metres of the planned quarry boundary.
- The proposed quarry operation will be set back from Mollard Road. This will minimize visibility of the site and its operations. Significant potential visual impacts should be prevented, minimized, or mitigated by an effective combination of:
  - Existence of remnant river-bottom forest woodlots and mature residential shelterbelts blocking views of most of the sightlines to the nominal location of the quarry.
  - Situation of the surface miner and most large equipment (and some stockpiles) below-grade.
  - Commitment to develop an integrated visual-screening system of strategically-placed vegetated berms across the few remaining viewscapes of the quarry location.
- Vegetation used for visual screening will emphasize native plant species, especially fast-growing trees (e.g. hybrid poplar), and water-transpiring shrubs (e.g. diamond willow). These species are common at the margins of agricultural lands in the region.

— Monitoring of the visual impact of the quarry will include tracking complaints about visual nuisance reported by neighbours situated close to the site.

WATER & NATURAL RESOURCE MANAGEMENT

— A review of Groundwater Drill (GWDRILL), the Province of Manitoba's database of water well logs, identified 75 groundwater wells present within two miles from the proposed quarry site perimeter. Results from the desktop well inventory suggest that many of the wells in the area surrounding the proposed quarry site are expected to be in relatively poor condition. It is recommended that a field inventory be conducted to inspect the well conditions and collect raw water samples from the wells. It is important to note that the GWDRILL database was initiated in 1964. Consequently, wells constructed earlier to this date are unlikely to be included in the database. In addition, it is generally understood that the database includes a record for only approximately half of the wells in the field. A field inventory would confirm the location, condition, and current state of use for each well and establish a baseline for regional groundwater quality prior to quarry operation.

— We recommend that the individual private well inventory conducted previously be reviewed and that any new wells be inspected. This should be undertaken to determine a baseline condition of the existing wells and to review the well hook ups and well completions. Baseline groundwater quality samples should also be collected. This work should be undertaken by qualified personnel who are familiar with domestic water wells and well hook ups. A licenced driller in the Province of Manitoba should undertake this work. The work should also be supervised and documented by a professional hydrogeologist or engineer.

— Based on assumptions, the water level at the site would need to be lowered 3-5 metres (9.8-16.4 feet) to dewater the bedrock to the lowest excavation levels.

— In the event that dewatering would be required, site specific testing at the time of implementation would be necessary to assess the potential response of the local aquifer to pumping stresses based on current conditions.

— It is assumed that a water supply will be required for quarry operation. Depending on the water demand, it is possible that a groundwater supply could be designed to satisfy dewatering requirements.

— A dewatering system at the proposed quarry site may encounter challenges dealing with the seepage inflows into the excavations under higher static water level conditions in the Stony Mountain Formation, especially when mining the deeper portions of the bedrock.

— Additional testing would be needed to quantify the required pumping rates and the potential aquifer responses. Preliminary estimates indicate pumping rates in the range of 250-1,000 US gallons per minute (USGPM) or more may be required.

— Based on the available information, the potential dewatering level is above the lowest historic levels on nearby hydrograph charts. Consequently, the overall risk of negative impacts to a significant number of off site wells is considered to be low. However, we suggest the quarry development plan have procedures to deal with potential issues relating to third party groundwater users. An inspection of nearby private wells near the proposed quarrying operation is recommended prior to undertaking aggregate mining. Wells with short casing sections, or open hole through both aquifers should be monitored closely for water quality changes.

— While the Quarry Operator intends for on-site temporary water storage, there will not be any new permanent surface-water storage ponds during operations.

— To date, Manitoba Sustainable Development has not noted any water quality changes or impacts from the long-standing quarry operations in the region. The bedrock aquifers in the area have a naturally shallow burial depth and have the potential to be impacted from surface activities such as landfills, lagoons, or leaking septic tanks. It is highly likely that the elevated nitrates in the region are a result of the shallow burial of the carbonate aquifer.

- The Stonewall upland area serves as a major source of recharge to the carbonate aquifer and all activities in the area should take this into account. The storage of fuels and oils, etc. should be done in an environmentally friendly manner, along with the collection of on-site wastewater and wash water. Refueling should not take place on the quarry floor.
- To minimize potential impacts to deeper aquifer formations, it is recommended that excavation does not penetrate the Gunn Member of the Stony Mountain Formation.
- The proposed quarry site is located within the Winnipeg Ecodistrict of the Lake Manitoba Plain Ecoregion at the southeastern portion of the Lake Manitoba Plain.
- Historically, the native vegetation found within the Winnipeg Ecodistrict consisted of tall prairie grass and meadow prairie-grass communities. Due to cultivation and the development of drainage ditches, the native vegetation in the area has largely disappeared.
- Much of the quarry site is currently cultivated for crop production.
- Field studies at the project site did not reveal the presence of any mammal species listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), the Species at Risk Act (SARA), and/or the Manitoba Endangered Species Act (MBESA).

TRANSPORTATION PLAN & HAUL ROUTE PLAN

- The plan for the aggregate operation identifies access from Mollard Road. This access will serve as the entrance to and exit from the development for employee traffic as well as all heavy truck traffic. Mollard Road is an existing two-lane undivided gravel municipal road.
- The proposed haul route for the quarry operation would require trucks to travel east on Mollard Road from the site access, pass through the intersection with Klimpke Road and continue to Brookside Boulevard, where they would perform either a left or right turn depending on their destination. Klimpke Road is a two-lane undivided roadway and Brookside Boulevard is a four-lane divided roadway. Mollard Road at Klimpke Road is a yield-controlled intersection (i.e. yield sign controlled for southbound and westbound traffic), and Mollard Road at Brookside Boulevard is a two-way stop-controlled intersection (i.e. stop sign controlled for eastbound and westbound traffic).
- Implications for the proposed haul route include:
  - Fully loaded semi-trailers would be required to make a turning movement at a unsignalized intersection onto a high-speed divided roadway (Brookside Boulevard).
  - Brookside Boulevard is the closest RTAC roadway to the development as access to PTH 101 from Sturgeon Road, and Klimpke Road is planned to be closed by Manitoba Infrastructure in the near future.
  - Trucks will pass by less than five existing residential homes on Mollard Road before turning onto Brookside Boulevard.
  - Brookside Boulevard is classified as an RTAC Route and has been designed for heavy vehicles.
  - Mollard Road is currently a gravel road. The roadway may need to be upgraded to accommodate heavy vehicles from the quarry.
- For this location, major future infrastructure includes the Chief Peguis Trail Extension from Main Street to Brookside Boulevard (CPT), and potentially its further extension to connect to CentrePort Canada Way (CPT & CCW).
- The proposed quarry development is forecast to generate:

- 70 new truck trips (40 entering and 30 exiting) and 20 new passenger vehicle trips (15 entering and five exiting) during the weekday a.m. peak hour;
- 70 new trucks trips (30 entering and 40 exiting) and 20 passenger vehicle trips (five entering and 15 exiting) during the weekday p.m. peak hour; and
- 460 new truck trips (230 entering and 230 exiting) and 60 new passenger vehicle trips (30 entering and 30 exiting) during a weekday.

- It is expected that all passenger vehicle trips will access the development via Mollard Road from Brookside Boulevard. The intersection of Brookside Boulevard and Mollard Road was assumed to have the following distribution:
  - 28 percent to/from the north on Brookside Boulevard; and
  - 72 percent to/from the south on Brookside Boulevard.
- Traffic signal warrants were completed for the Mollard Road and Brookside Boulevard intersection following the *Canadian Matrix Traffic Signal Warrant Analysis* developed by the Transportation Association of Canada. The results of the analysis indicate that traffic signals are not warranted at the intersection of Brookside Boulevard and Mollard Road based on the forecast 2019 and 2029 post development traffic volumes.
- An analysis of collision date and collision rates in the study area did not identify any significant concerns.
- It is recommended that the intersection of Mollard Road and Klimpke Road be converted to a two-way stop-controlled intersection, with the northbound and southbound approaches to the intersection stop controlled. With the revised configuration, Synchro analysis indicates that the intersection is forecast to operate at an acceptable level of service with the proposed development.
- The existing accesses on Mollard Road and Klimpke Road would be closed.

ADAPTIVE MANAGEMENT

- The applicant has prepared an *Adaptive Management Plan* that provides a guideline for how the North Perimeter Aggregates Quarry operations should be monitored and managed in a safe and efficient manner, evaluating and adjusting operations, as necessary.
- The *Adaptive Management Plan* includes monitoring plans, mitigation measures, trigger mechanisms, and contingency plans for the various aspects of the quarry operations.
- North Perimeter Aggregates is committed to establishing a Citizens' Advisory Committee (CAC) that may include residents, the site operator, Provincial officials, and local Councillors. This will establish an ongoing dialogue between area residents and the Quarry Operator and provide for efficient communication among all parties. The Quarry Operator will coordinate quarterly meetings with the CAC to provide committee members with project updates and gain important feedback on any concerns related to the quarry operations.

PROGRESSIVE REHABILITATION

- In keeping with the most current methods of quarry development and in compliance with the provincial pit and quarry rehabilitation program standards, the applicant will develop the North Perimeter Aggregates Quarry in smaller, discrete phases that will allow for the ongoing and progressive reclamation and rehabilitation of the site while the quarry is in operation.
- The *Quarry Progressive Rehabilitation Plan* advances the aggregate extraction in a logical fashion along the seam containing the highest quality deposit.
- Once mining of the quarry is complete, the applicant will restore the site to a useable state in compliance with the provincial pit and quarry rehabilitation program (e.g. agricultural, recreational, or other use, as determined by the Council at the time).
- In accordance with the Inland Port Special Planning Area Development Plan, the site cannot be developed for any other purpose until the aggregate resource has been fully exploited and the site rehabilitated for its intended next use.
- The estimated date of final progressive rehabilitation for the land is 2035.
- It is expected that once rehabilitated, the site may be utilized for an industrial-type use in keeping with permitted uses within the Industrial Heavy Zone ('I3') of the Inland Port Special Planning Area Zoning By-law.

North Perimeter Aggregates Quarry Permit Checklist

March 2019

BY-LAW REQUIREMENT	INCLUDED	APPROVED BY RM
1. i. $15,000 fee	✓	
ii. Application persons contact info	✓	
iii. Quarry Operations persons contact info	✓	
iv. Proof of retention of a Professional Engineer	✓	
Site & Operation Plan		
2. i. a) Proposed hours of operations	✓	
b) Boundaries of the quarry	✓	
c) Land area & depth of excavation	✓	
d) Area to be excavated first & staging of excavation	✓	
e) Location & use of existing & proposed buildings & structures on-site & existing buildings & structures on lands within 800 meters of the site boundaries	✓	
f) Location of existing & proposed areas for separate stockpiling of topsoil, overburden stripping & mined material	✓	
g) Location, width, height & description of existing & proposed landscaped buffers or berming & existing & proposed entrances & exits, on-site roads & parking & loading areas	✓	
h) Location of any storage or deposit facilities to be used in storing excavated materials or topsoil	N/A	
i) Nature & location of Quarry Ancillary Uses	✓	
j) Proposed security measures	✓	
k) Anticipated dust & means to control dust	✓	
Impact Assessments		
ii. a) Blasting Impact Assessment	✓	
b) Sound Impact Assessment	✓	
c) Visual Impact Assessment	✓	
Water & Natural Resource Management Plan		
iii. a) Surface water diversion	✓	
b) Groundwater withdrawal	✓	
c) Storage & drainage plans	✓	
d) Impact assessment of potential effects on water wells, springs, groundwater, surface watercourse and bodies, wetlands, woodlands	✓	
e) Impact assessment of potential effects on fish & wildlife habitat	✓	

f) Identification of water wells within a 1 km radius of the Quarry site	✓	
Adaptive Management Plan		
iv. a) Monitoring plans	✓	
b) Mitigation measures	✓	
c) Trigger mechanisms	✓	
d) Contingency plans	✓	
Progressive Rehabilitation Plan		
v. a) Geotechnical analysis (long-term stability of slopes & slope configuration)	✓	
b) Intended staging for Progressive Rehabilitation (including date & cost estimates)	✓	
Transportation Plan & Haul Route Plan		
vi. a) Map of any municipal roads or highways to be used during the Quarry Operation for haul routes	✓	
b) Capacity of the transportation system	✓	
c) Location of existing & proposed truck entrances & exits	✓	
d) Location of existing & proposed parking & loading areas	✓	
e) Proposed hauling route plan	✓	
Insurance coverage – proof of comprehensive liability insurance		
a) Proof of comprehensive liability insurance	✓	

Quarry Permit Application – Schedule 'A'

Name of Applicant: Gord Broda, Broda Properties Inc.
Operated By: North Perimeter Aggregates Inc. c/o Broda Properties Inc.
Civic Address of Property: Pt. Section 4-12-2 EPM and Pt. Section 33-11-2 EPM, see: **Table 1**
Legal Description of Property: See: **Table 1**

Table 1:

Roll Number	Certificate of Title	Legal Description	Civic Address	Acres (±)
95920	2405479	Pt. SW ¼ 4-12-2E	no civic address	144.40
95800	2405478	SE ¼ 4-12-2E	8 128 E Road 66 N	158.49
	2405481			
95400	2405478	Pt. NE ¼ 4-12-2E	no civic address	55.77
95900	2406450	Pt. SW ¼ 4-12-2E	8 054 E Road 66 N	9.00
95950	2405482	Pt. SW ¼ 4-12-2E	8 070 E Road 66 N	5.00
90200	2405477	Pt. NE ¼ 33-11-2E	no civic address	142.87
90500		Pt. NW ¼ 33-11-2E	no civic address	73.93

1. **The Quarry Operator or their designate may apply for a Quarry Permit online through the Municipal Website and include with their application, the following**:

   i. **A non-refundable fee, in the form of a certified cheque, money order or cash, payable to the Municipality in the amount of $15,000.00 with a confirmation the anticipated professional fees for review of the application will be paid by the Quarry Operator to the Municipality as and when determined by the Municipality in its sole discretion;**

   The applicant has submitted a certified cheque for $15,000.00 to the RM of Rosser in conjunction with this application.

   The applicant confirms that the Quarry Operator will pay the RM of Rosser for the anticipated professional fees for review of the application, as and when determined by the Municipality.

   ii. **The full names, addresses and contact information of the Persons and any agents who are responsible for the Quarry Permit Application;**

   Gord Broda
   North Perimeter Aggregates Inc.
   c/o Broda Properties Inc.
   RR 2 Site 4 Comp 207
   Prince Albert, SK
   S6V 5P9
   306-961-2726
   Gord.Broda@sasktel.net

David Jopling
Manager
Planning, Landscape Architecture and Urban Design
WSP
93 Lombard Avenue, Suite 111
Winnipeg, MB
R3B 3B1
(204) 943-3178
David.Jopling@wsp.com

iii. The full names, addresses and contact information of the Persons and any agents who are responsible for the Quarry Operations;

Gord Broda
North Perimeter Aggregates Inc.
c/o Broda Properties Inc.
RR 2 Site 4 Comp 207
Prince Albert, SK
S6V 5P9
306-961-2726
Gord.Broda@sasktel.net

iv. Proof of retention of a Professional Engineer;

Kerra Mruss, M.Sc., P.Eng., FEC
Manager
Transportation Planning
WSP
93 Lombard Avenue, Suite 111
Winnipeg, MB
R3B 3B1
(204) 943-3178
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Ray Jambaksh, M. Sc., P.Eng.
Senior Blast Engineer
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rjambakhsh@dstgroup.com

Jeff Bell, B.Sc. (G.E.), P.Eng.
Hydrogeological Engineer
Friesen Drillers Ltd.
307 PTH 12 N
Steinbach, MB R5G 1TB
(204) 326-2485
jeff@friesendrillers.com

2. **The Quarry Operator must submit the following information as part of their Application:**

i. A detailed Site and Operation Plan indicating:

a. The proposed hours of operations of the Quarry Operations;

The proposed hours of operations of the Quarry Operations are as follows:

- 7:00 - 18:00 Monday to Friday;
- 9:00 - 12:00 on Saturdays; and
- Closed on Sundays.

Operating hours may extend to 24 hours/day, 7 days/week during start-up to build inventory, or to accommodate a special product.

b. The boundaries of the Quarry Operation;

The subject site is located in the RM of Rosser, legally described as lands in Section 4-12-2 EPM and Section 33-11-2 EPM. The site is bordered by the Perimeter Highway (PTH 101) to the north; Klimpkie Road to the east; Farmer Road to the south; and Sturgeon Road to the west, with Mollard Road running east-west through the site, as illustrated in **Figure 1: Quarry Boundary**.

c. The land area and depth of excavation including a key map and Site Plan showing the Quarry Operations and surrounding land;

The Quarry Operations will encompass approximately 589 acres of the subject site. The depth of excavation will be approximately 8-10 metres deep so that it can be crushed and conveyed for stockpiling. The final depth of excavation will depend on future varying combinations of excavation conditions, groundwater elevations, and markets for the various types of construction materials that can be created from the crushing operation. The final depth is unknown; however, the approximate depth of excavation from rock surface will be 10 metres, including sub-drill.

Figure 2: Land Area and Excavation illustrates the Quarry Operations and surrounding land.

d. Identification of the area in the Quarry Operations to be excavated first and staging of the excavation;

Figure 3: Phasing illustrates the area in the Quarry Operations to be excavated first (identified as Phase 1), followed by the staging of the excavation (identified as Phases 2-5), and the eventual **Site Rehabilitation** in **Figure 4**.

e. The location and use of existing and proposed buildings and structures on-site, and the location of existing buildings and structures on lands within 800.0 metres (2600.00 ft.) of the site boundaries;

Figure 5: Location of Existing Buildings and Structures illustrates the location and use of existing and proposed buildings and structures on site, and the location of existing buildings and structures on lands within 800.0 metres (2600.00 ft.) of the site boundaries.

f. The location of existing and proposed areas for separate stockpiling of topsoil, overburden stripping, and mined material;

Figure 5: Quarry Layout illustrates the location of existing and proposed areas for separate stockpiling of topsoil, overburden stripping, and mined material. The applicant is proposing to use the overburden stripping to construct a 5-metre-high, 33-metre-wide berm along the north, east, south and west boundaries of the site.

g. The location, width, height and description of existing and proposed landscaped buffers or berming, and existing and proposed entrances and exits, on-site roads and parking and loading area;

Figure 6: Quarry Layout illustrates the location, width, height and description of existing and proposed landscaped buffers or berming, and existing and proposed entrances and exits, on-site roads, and parking and loading area. As mentioned above, the proposed berm will be 5 metres high and 33 metres wide.

h. The location of any storage or deposit facilities to be used in storing excavated materials or topsoil;

There will be no storage or deposit facilities/buildings located on-site. Topsoil and overburden will be stored onsite in stockpiles, not within a facility.

i. The nature and location of any Quarry Ancillary Uses as set out in Section 10 of this By-Law;

The applicant proposes to bring a 12 ft. by 60 ft. trailer onto the subject site. The trailer will be an office for employees and an Ancillary Use to the Quarry Operations. The applicant also proposes to bring a 10 ft. by 80 ft. truck scale onto the subject site. The purpose of the scale is to weigh the trucks full of aggregate before they leave the site. The scale will also be an Ancillary Use to the Quarry Operations. Other Ancillary Uses

may include a small and large maintenance shop, as well as a scale house. **Figure 6: Quarry Layout** illustrates the location of the proposed Ancillary Uses.

j. The proposed security measures for the Quarry Operations;

The applicant proposes to install a locked gate at each entrance to the site, as identified in **Figure 7: Security Measures**. The applicant also proposes to install security cameras at each entrance and around key areas where employees will be working and operating heavy machinery. Quarry operators will review the camera footage daily to monitor access to the site and address any unauthorized activity in a timely manner. Extensive berming along the periphery of the site will help to control unauthorized access of vehicles, ATVs, and pedestrians. The site will also include multiple signs at each entrance and along its perimeter to remind visitors that all unauthorized access is prohibited. Signs may read, "Private Property", "No Trespassing" or "No Hunting".

k. The anticipated dust and means to control dust;

The primary anticipated dust source will be from the crushing and screening of aggregates, along with equipment and vehicle travel within the Quarry. Other dust sources may include equipment and vehicle emissions, recently stripped soil or overburden, as well as Quarry working areas.

The applicant will use the following dust mitigation measures as part of the Quarry activities and operations:

- Seed soil and overburden stockpiles to grass and incorporate native plantings;
- Plant grass and native plantings along berms;
- Spray water on equipment, as required;
- Spray water on unpaved access roads, as required;
- Treat unpaved access roads with calcium chloride applications, as required;
- Reduce truck speed on unpaved roads; and
- Use aggregate stockpiles for screening.

ii. Impact Assessments or addendums as follows:

a. **Blasting Impact Assessment or addendum demonstrating the proposed blasting procedure, extraction procedure, vibration levels and means to control vibrations**;

The Blasting Impact Assessment is included in **Chapter 02**.

b. **Sound Impact Assessment or addendum demonstrating the anticipated noise and means to control the noise**;

The Sound Impact Assessment is included in **Chapter 03**.

c. **Visual Impact Assessment or addendum**;

The Visual Impact Assessment is included in **Chapter 04**.

iii. **Water and Natural Resource Management Plan showing:**

a. **Surface water diversion;**

b. **Groundwater withdrawal;**

c. **Storage and drainage plans;**

d. **Impact assessment of potential effects on water wells, springs, groundwater, surface watercourse and bodies, wetlands, woodlands;**

e. **Impact assessment of potential effects on fish and wildlife habitat; and**

f. **Identification of water wells within a one-kilometre radius of the Quarry site;**

The Water and Natural Resource Management Plan is included in **Chapter 05**.

iv. **An Adaptive Management Plan including technical reports to identify:**

a. **Monitoring plans;**

b. **Mitigation measures;**

c. **Trigger mechanisms; and**

d. **Contingency plans;**

The Adaptive Management Plan is included in **Chapter 06.**

v. **A Progressive Rehabilitation Plan including:**

a. **A geotechnical analysis by a Certified Engineering Geologist or Registered Geotechnical Engineer, using Progressive Rehabilitation Guidelines, demonstrating the long-term stability of all final slopes and the slope configuration needed to ensure the safety and revegetation appropriate to the end use of the mined land;**

The applicant is committed to retaining a Certified Engineering Geologist or Registered Geotechnical Engineer to conduct a geotechnical analysis, using Rehabilitation Guidelines, to demonstrate the long-term stability of all final slopes and the slope configuration needed to ensure the safety and revegetation appropriate to the end use of the mined land. The applicant will retain a professional geologist or engineer when the mining activity is nearing completion during Phase 5 of the Progressive Rehabilitation Plan.

b. **The intended staging for Progressive Rehabilitation, and how the Progressive Rehabilitation plan is in compliance with the provincial pit and quarry rehabilitation program standards and any standards established by the Municipality, including the proposed date of final Progressive Rehabilitation for the land and estimates of the Progressive Rehabilitation costs;**

Figure 4: Progressive Rehabilitation illustrates the intended staging for Progressive Rehabilitation of the Quarry. The Quarry will be developed over six phases commencing in 2020, including five mining phases followed by the longer-term rehabilitation and land reclamation phase that, while ongoing over the course of aggregate extraction, will extend beyond the estimated mine closure date of 2035.

In keeping with the most current methods of quarry development and in compliance with the provincial pit and quarry rehabilitation program standards, the applicant will develop the Quarry in smaller, discrete phases that will allow for the ongoing and progressive reclamation and rehabilitation of the site while the Quarry is in operation. The Progressive Rehabilitation Plan (as illustrated in **Figure 5: Phasing** and **Figure 4: Site Rehabilitation**) advances the aggregate extraction in a logical fashion along the seam containing the highest quality deposit. Once mining of the quarry is complete, the applicant will restore the site to a useable state in compliance with the provincial pit and quarry rehabilitation program.

The estimated date of final progressive rehabilitation for the land is 2035. At this point in time, it is difficult to estimate the cost of the progressive rehabilitation; however, once it is possible to calculate these costs, the applicant will provide this information to the RM of Rosser and the Citizens' Advisory Committee (CAC). The Progressive Rehabilitation Plan and associated costs will be part of an ongoing conversation with the RM of Rosser and the CAC.

The Progressive Rehabilitation Plan is included in **Chapter 06.**

vi. Transportation Plan and Haul Route Plan showing:

- **a. A map of any municipal roads or highways to be used during the Quarry Operation for haul routes;**
- **b. The capacity of the transportation system;**
- **c. The location of existing and proposed truck entrances and exists;**
- **d. The location of existing and proposed parking and loading areas;**
- **e. The proposed hauling route plan;**
- **f. And any additional information as requested by the Designated Officer pertaining to matters such as traffic volumes and on-going road maintenance projections;**

The Transportation and Haul Route Plan is included in **Chapter 07.**

vii. Insurance coverage, including:

- **a. Proof of comprehensive liability insurance which lists the Municipality as additional insured, at a minimum of five million dollars ($5,000,000.00);**

Proof of comprehensive liability insurance is included as **Appendix A**.

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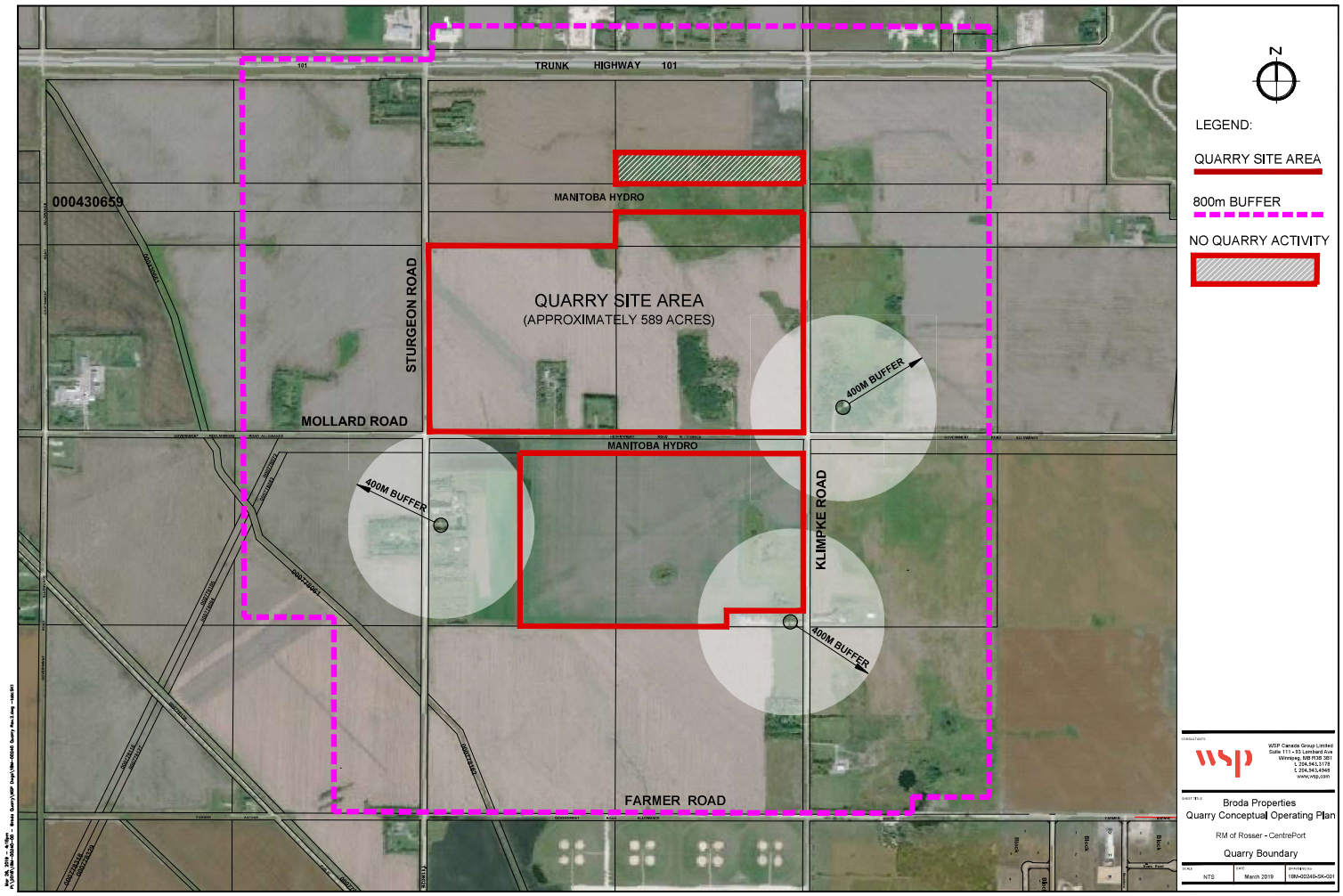
SITE AND OPERATION PLAN

01

NORTH PERIMETER AGGREGATES QUARRY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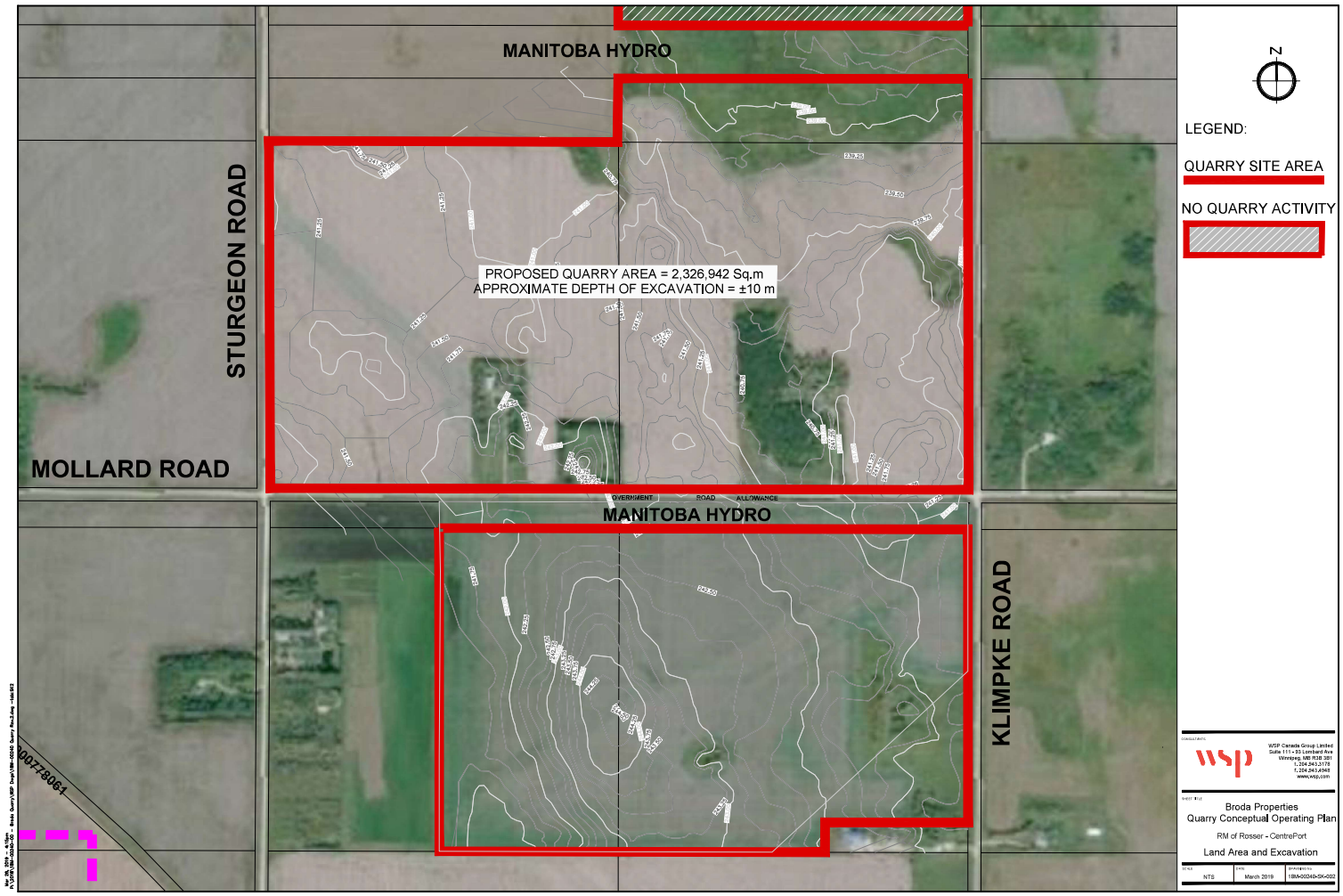
MOLLARD ROAD
MANITOBA HYDRO
KLIMPKE ROAD
400M BUFFER
400M BUFFER
400M BUFFER
FARMER ROAD
N
LEGEND:
QUARRY SITE AREA
800m BUFFER
NO QUARRY ACTIVITY
WSP Canada Group Limited
Suite 111 - 93 Lombard Ave
Winnipeg, MB R3B 3B1
T 204.943.3779
F 204.943.4948
www.wsp.com
Broda Properties
Quarry Conceptual Operating Plan
RM of Rosser - CentrePort
Quarry Boundary
NTS
March 2019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GOVERNMENT ROAD ALLOWANCE
MANITOBA HYDRO
KLIMPKE ROAD
100778064
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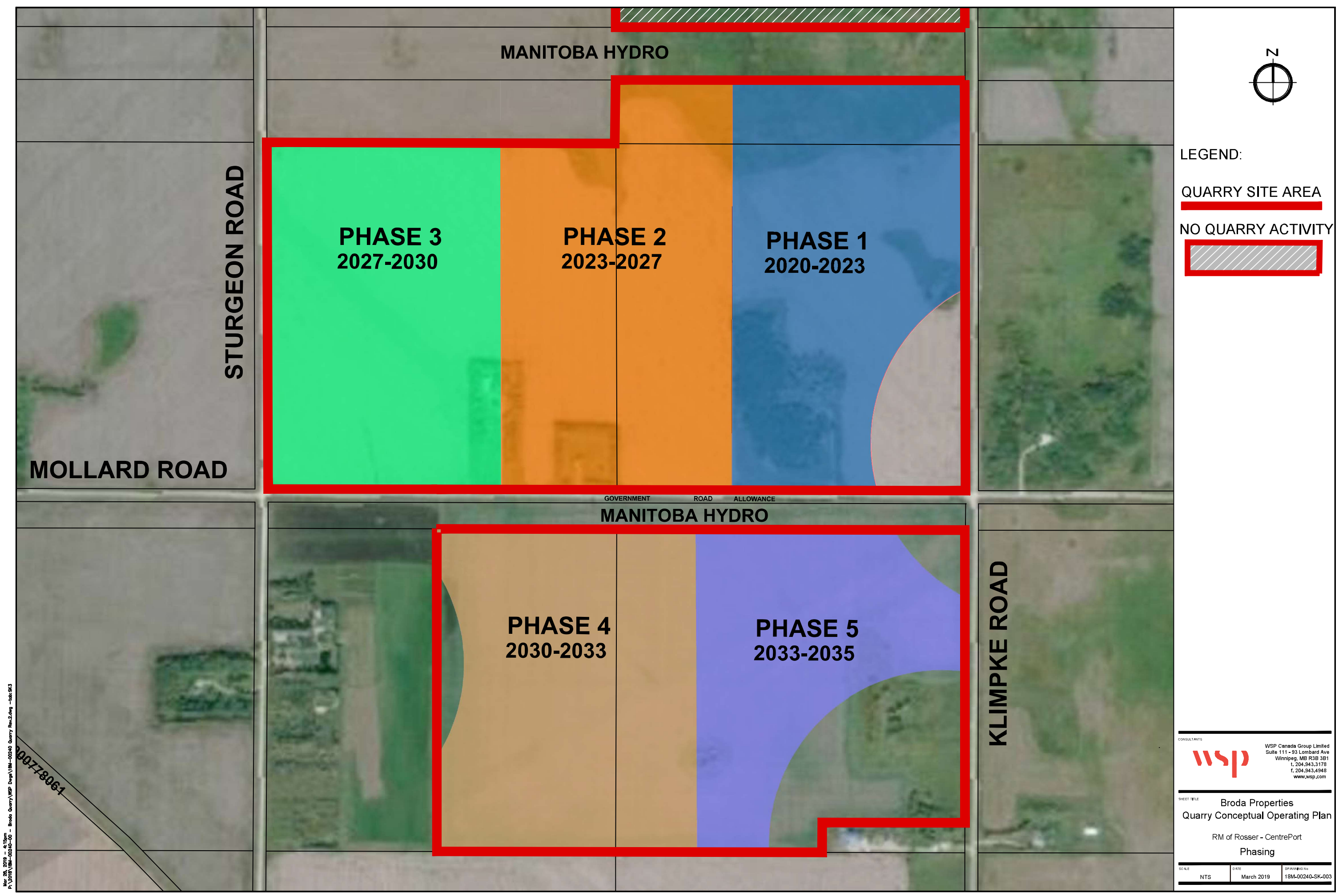
QUARRY SITE AREA
NO QUARRY ACTIVITY
wsp
WSP Canada Group Limited
Suite 111 - 93 Lombard Ave
Winnipeg, MB R3B 3B1
T. 204.943.3779
F. 204.943.4948
www.wsp.com
Broda Properties
Quarry Conceptual Operating Plan
RM of Rosser - CentrePort
Land Area and Excavation
NTS
March 2019
18M-00240-SK-002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PHASE 4
2030-2033
PHASE 5
2033-2035
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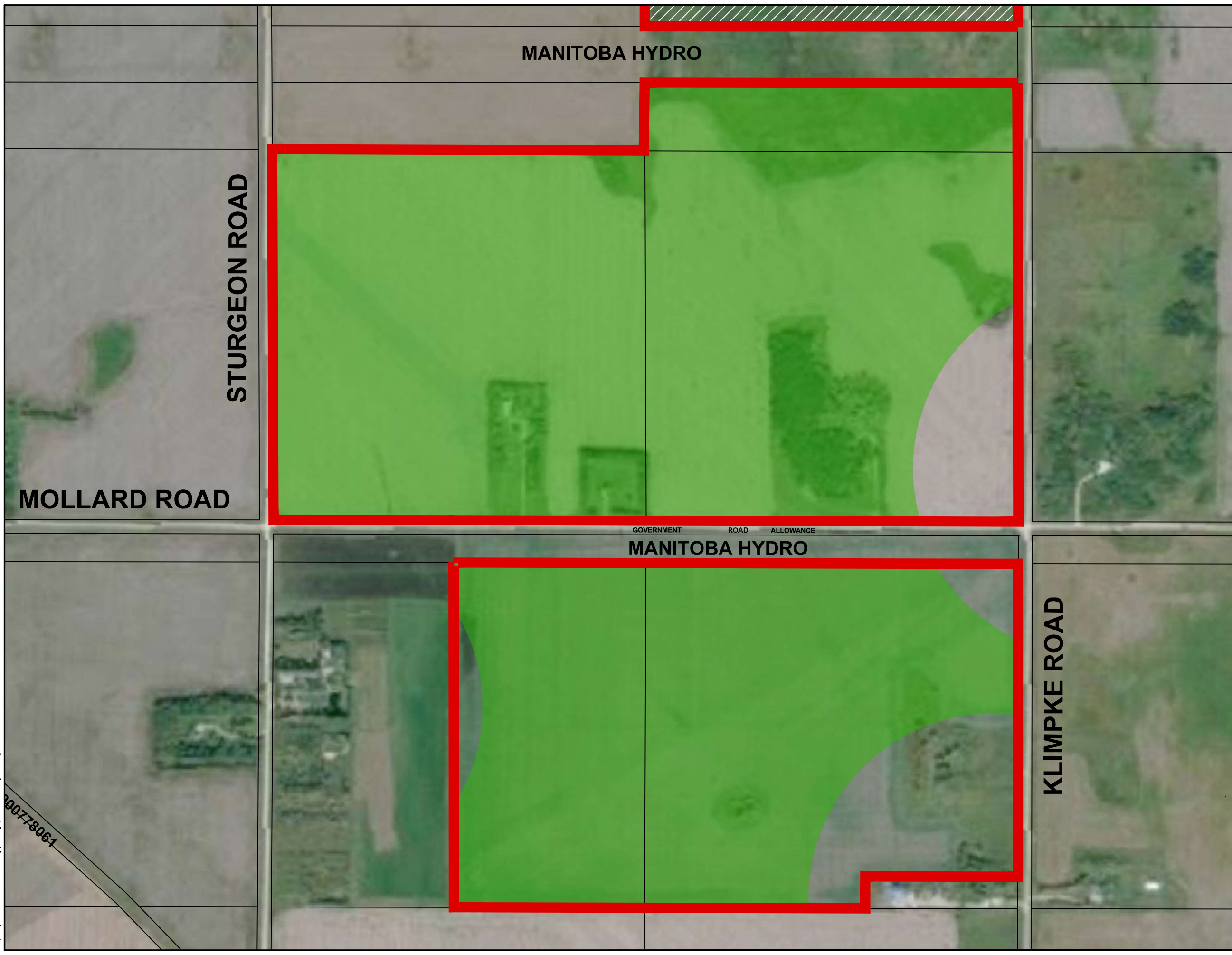
LEGEND:
QUARRY SITE AREA
NO QUARRY ACTIVITY
CONSULTANTS
WSP Canada Group Limited
Suite 111 - 93 Lombard Ave
Winnipeg, MB R3B 3B1
t. 204.943.3178
f. 204.943.4948
www.wsp.com
SHEET TITLE
Broda Properties
Quarry Conceptual Operating Plan
RM of Rosser - CentrePort
Phasing
SCALE
NTS
DATE
March 2019
DRAWING No
18M-00240-SK-003



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LEGEND:

QUARRY SITE AREA

REHABILITATION AREA

NO QUARRY ACTIVITY

CONSULTANTS

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Winnipeg, MB R3B 3B1
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SHEET TITLE

Broda Properties
Quarry Conceptual Operating Plan

RM of Rosser - CentrePort

Site Rehabilitation

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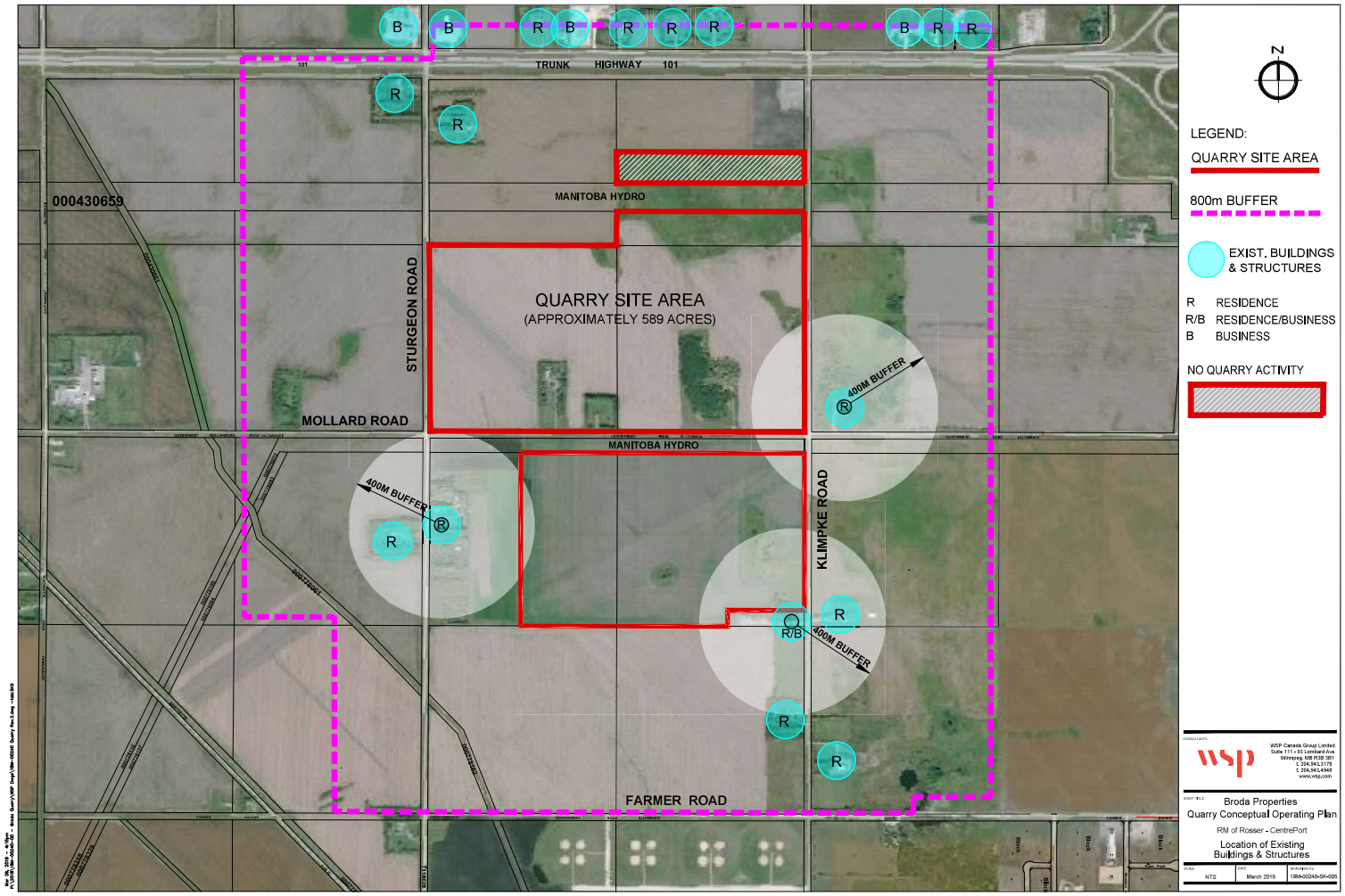
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MOLLARD ROAD
MANITOBA HYDRO
KLIMPKE ROAD
400M BUFFER
400M BUFFER
400M BUFFER
FARMER ROAD
B
R
R/B
LEGEND:
QUARRY SITE AREA
800m BUFFER
EXIST. BUILDINGS & STRUCTURES
R RESIDENCE
R/B RESIDENCE/BUSINESS
B BUSINESS
NO QUARRY ACTIVITY
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WSP Canada Group Limited
Broda Properties
Quarry Conceptual Operating Plan
RM of Rosser - CentrePort
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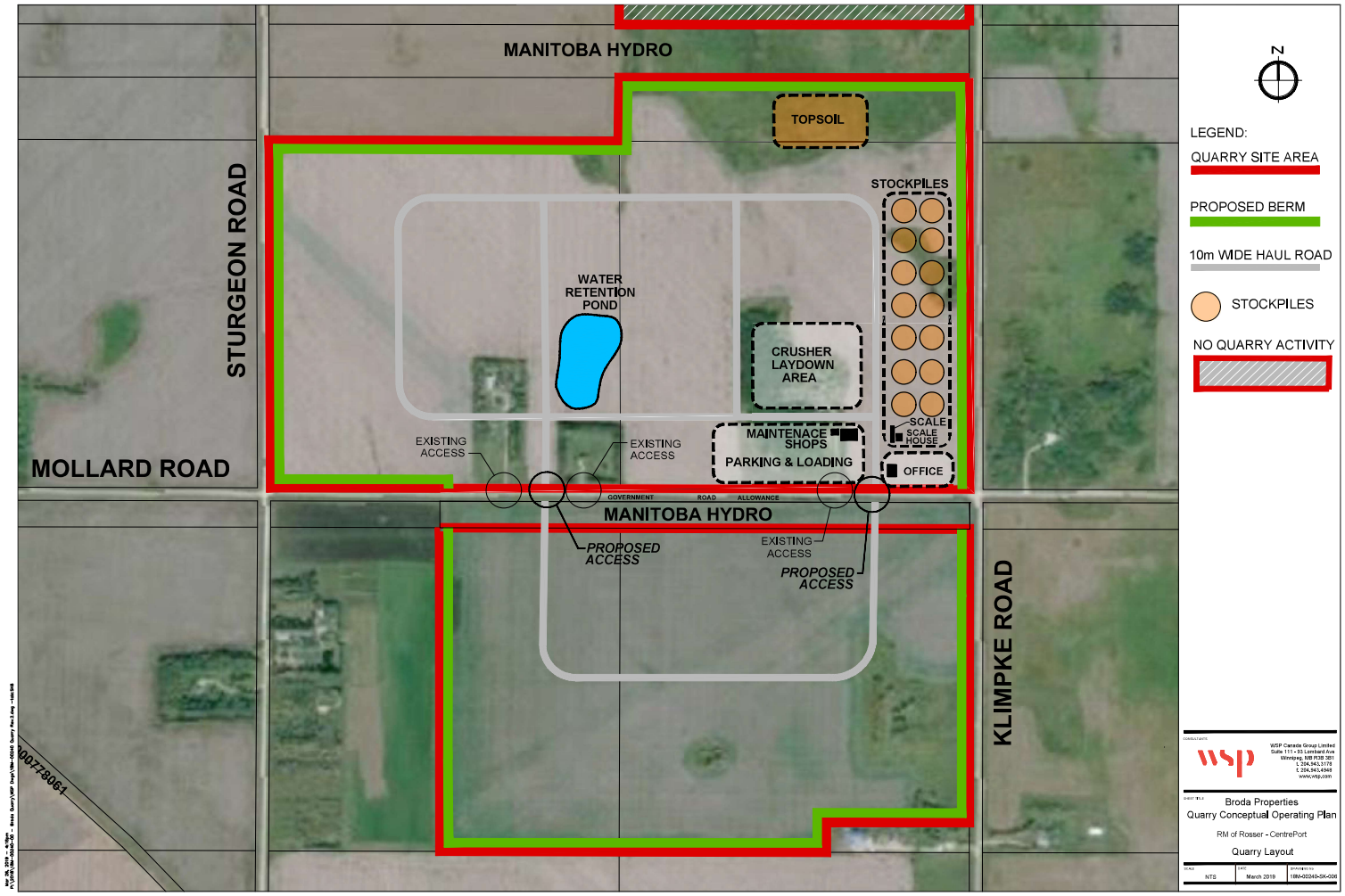
NTS
March 2019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OFFICE
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LEGEND:
QUARRY SITE AREA
PROPOSED BERM
10m WIDE HAUL ROAD
STOCKPILES
NO QUARRY ACTIVITY
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F: 204.943.4948
www.wsp.com
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Quarry Conceptual Operating Plan
RM of Rosser - CentrePort
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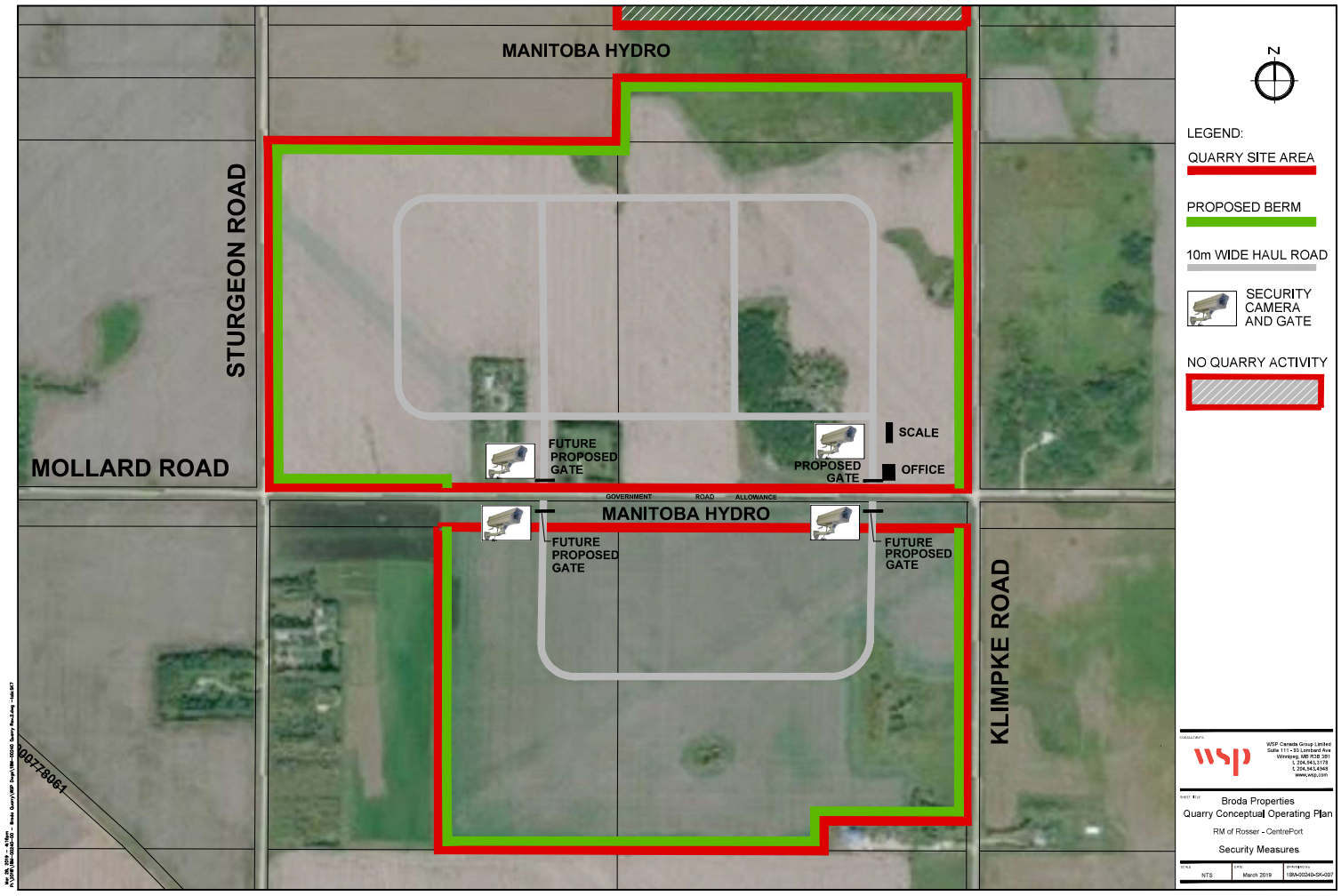
NTS
March 2019
191-02240-SK-006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QUARRY SITE AREA
PROPOSED BERM
10m WIDE HAUL ROAD
SECURITY CAMERA AND GATE
NO QUARRY ACTIVITY
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Broda Properties
Quarry Conceptual Operating Plan
RM of Rosser - CentrePort
Security Measures
NTS
March 2019

BLASTING IMPACT ASSESSMENT

02

NORTH PERIMETER AGGREGATES QUARRY

REPORT ON

BLAST IMPACT ASSESSMENT
PROPOSED NORTH PERIMETER AGGREGATES QUARRY
RURAL MUNICIPALITY OF ROSSER
PROVINCE OF MANITOBA

Prepared for:

Broda Properties Inc.
RR2, Site 4, Comp. 207, Stn. MMP
Prince Albert, Saskatchewan
S6V 5P9

DST File No.: IN-NO-033870

Final REPORT

October 25, 2018

1 copy – Broda Properties Inc. – Prince Albert, Saskatchewan
1 copy – DST Consulting Engineers Inc., Sudbury, Ontario

DST CONSULTING ENGINEERS INC.
885 Regent Street, Suite 3-1B, Sudbury, ON, P3E 5M4
Tel: (705) 523-6680 Fax: (705) 523-6690 Web: www.dstgroup.com

EXECUTIVE SUMMARY

DST Consulting Engineers Inc. was retained by Broda Properties Inc. (BPI) of Prince Albert, Saskatchewan, to conduct a blast impact assessment for the proposed North Perimeter Aggregates Quarry (The Quarry). The North Perimeter Aggregates Inc., a subsidiary of Broda Properties Inc. will be operating The Quarry for extracting aggregate. The Quarry is located on lands identified as Section 4 Township 12 Range 2EPM, and Section 33, Township 11, Range 2EPM within the Rural Municipality of Rosser, Manitoba. The subject land is held by Broda Properties Inc.

The Blast Impact Assessment (BIA) report is limited to the impact of blast induced overpressure/noise and vibrations on surrounding third party sensitive and non-sensitive receptors and includes recommended site-specific blast design and explosive loading calculations for the proposed quarry which is based on the following:

- Observations made during our site visit carried out on June 20, 2018,
- Review of site plan drawings prepared by WSP, October 9, 2018,
- Review of Manitoba Mines and Minerals Act, Quarry Minerals Reg. M162-M.R. 65/92, March 20, 1992,
- Review of RM of Rosser By-Law No. 8-15
- Review of Environmental Monitoring Plan prepared by MLi3
- Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters, Department of Fisheries and Oceans Canada (DFO), 1998, and
- The worst-case scenario for potential blast damage to surrounding structures from vibrations and overpressure induced by blasting operations.

The quarry will be developed in 5 phases. The extracted areas will be subject to progressive rehabilitation process in accordance with guidelines and regulations and agreements between the proponent and governing authorities.

This report presents vibration and noise prediction calculations for various standoff distances. These calculations are based on the worst-case blast parameters scenario and the Manitoba's quarry minerals regulations for vibration and overpressure guideline limits. The resulting calculations indicate that the blasting in all phases of the proposed extraction areas can be carried out safely and well within the MMA Quarry Reg. M162-M.R. 65/92 Clause 44(1) to 44(3), inclusive. Blast vibration and overpressure levels obtained during the initial blasting can be used to adjust blasting parameters for the remaining blasting operations to ensure all phases of the operations meet all the governing regulations and requirements, provided recommendations in this report are implemented.

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1.0 INTRODUCTION

The proposed North Perimeter Aggregates Quarry is geographically located on lands identified as Section 4 Township 12 Range 2EPM, and Section 33, Township 11, Range 2EPM within the Rural Municipality of Rosser, Manitoba. The proposed licensed area is bordered by farmland and Perimeter Highway on the north, Klimpke Road and farmland on the east, farmland and Sturgeon Road on the west, and farmland on the south. The licensed area consists of approximately 232.7 Hectares of land. The proposed licensed area is intersected by the Mollard Road, running east-west at approximately mid-section of the land. The five (5) phases of proposed mineral extraction area, within the licensed area, will be reduced allowing for the required setback distances from adjacent properties and sensitive receptors. The proposed operation will primarily extract high quality dolomitic limestone rock formed in horizontal strata layers with an average density of 2.8-2.9 g/cc. to an approximate depth of 10 m from the existing rock surface level. The site plan drawings prepared by WSP showing proposed licenced area, information pertaining to mineral extraction, and the closest third-party properties within 800 m of the proposed licenced area are attached in Appendix “A”.

2.0 EXTRACTION PROCEDURE AND EXISTING SITE CONDITIONS

The extraction zone within the proposed licensed area is limited to sections identified in the site plan drawings as Phases 1 to 5. The common methodology selected for extracting the mineral deposit includes stripping of overburden, employing Continuous Surface Miner Machine(s), and occasional Drilling and Blasting, crushing, and loading and hauling of the crushed (finished) material. The extraction procedure at this site will include approximately 20% stripping of overburden, 25% continuous surface mining and drilling and blasting, 30% crushing, and 25% loading and hauling operations. Thus, drilling and blasting process represents the minor component of the extraction procedure. This process is explained in more details later in this report. It is important to note that approximately 90% of rock extraction will be performed using continuous miner machines equipped with dust suppression systems, and 10% will be conducted using drilling and blasting and only when massive layers of Dolomite is encountered.

The proposed extraction area is mainly surrounded by active farmland with associated residential buildings (sensitive receptors) on all sides (north, south, east, west). It is inherent that extraction limits during all phases of the proposed operations are designed for a minimum standoff distance of 400 m from the closest residential building (sensitive receptor), on all sides, in accordance with the requirements of MMA Reg. M162-M.R.65/92, Clause 43(1)(b)(ii).

According to site plan drawings, the elevation of mineral deposit ranges between 240 masl to 242 masl with overburden being 1.0 m to 5.0 m deep. The existing water table occurs 3.0 m to 6.0 m below surface and ranges from approximately 235 masl to 238 masl. Depth of excavation from rock surface will be to an approximate depth of 10 m including sub-drill.

Blasting design and procedures recommended later in this report are based on present federal and provincial (Manitoba) guidelines and regulations governing blasting operations in mines and quarries within the context of vibration and overpressure limits. Since the proposed extraction is a new development, and there are no existing site-specific blast-induced vibration and overpressure records (data), predictive formulas recommended by the International Society of Explosive Engineers are used for establishing maximum allowable quantities of explosives per delay period at given standoff distances (closest sensitive receptor locations) from blasting operations.

Recommendations are included in this report to ensure that the blasting operations are carried out in a safe and productive manner and to ensure that damage to existing third-party buildings (receptors) do not occur due to blasting operations.

3.0 RECEPTORS AND WATER BODIES

There are several third-party receptors located in the vicinity of the proposed extraction area. In addition, there are two sets of Power Transmission lines running east-west, along Mollard Road and north of Mollard Road through mid section and northern half of the proposed licensed area respectively. Power lines and supporting towers are considered as non-sensitive receptors. A set-back distance from the Power

Transmission corridors may be required. When blasting at or close to the setback distance from the power transmission corridors and towers, adjustments to blasting parameters (reduction in hole diameter, and/or multiple decking of explosive charges) may be required in order to meet the vibration level requirements. According to MLi3 Environmental Monitoring Plan report, there are no identified waterbodies within the proposed licensed area. The closest identified waterbody is located at an approximate distance of 6.3 km to the north of proposed licenced area and is known as the Grassmere Creek Darin. In addition, there are no identified waterbodies within 800 m standoff distance of the subject property boundary. The addresses of all sensitive receptors located I the vicinity of the proposed extraction area are listed below. It must be noted that most of these receptors are located well beyond the minimum standoff distance of 400 m from the proposed extraction area. These sensitive receptors are denoted by R1 to R9 on the Google Earth aerial view in Appendix “A”.

1. (R1): 65118 Sturgeon Road, Rosser,
2. (R2): 65125 Sturgeon Road (Little Mountain Farm), Rosser,
3. (R3): 66129 Sturgeon Road, Rosser,
4. (R4): 66148 Sturgeon Road, Rosser,,
5. (R5): 9008E Mollard Road (Earnie Futros), Rosser,
6. (R6): 65038 Klimpke Road (Earnie Furus), Rosser,
7. (R7): 65028 Klimpke Road, Rosser,
8. (R8): 65029 Klimpke Road, Rosser,and
9. (R9): 65081 Klimpke Road, Rosser.

The BIA and examples of blast design calculations, recommended later in this report, are based on the provincial guidelines and regulations for blasting in mines and quarries, namely Manitoba Mines and Minerals Act (MMMA), Quarry Minerals Reg. M162-M.R. 65/92, March 20, 1992. In the absence of adequate and reliable existing site-specific blast induced vibration and overpressure (noise) data, stringent predictive formulas recommended by the International Society of Explosive Engineers for predictive calculations are used.

Recommendations are included in this report to ensure that the blasting operations are carried out in a safe and productive manner, and to ensure that no possibility of damage exists to the receptors in the area, and MMMA vibration and overpressure guidelines and regulations are met.

4.0 BLAST VIBRATION AND OVERPRESSURE LIMITS

4.1 Definitions

Blast Induced Peak Particle Velocity (Vibration)

The rate of change of the amplitude, usually measured in mm/sec or in/sec. This is the excitation of the particles in the ground resulting from vibratory motion induced by the blasting operations.

Blast Induced Overpressure or Peak Sound Pressure Level (PSPL)

A compression wave in air caused by,

a) The direct action of the unconfined explosive, or

b) The direct action of the confining material subjected to explosive loading.

4.2 Overpressure and Vibration Limits

The MMMA guidelines for blasting in quarries are as follows

1. ***Clause 44(2):*** *No operator of a quarry shall permit any blasting at the quarry that emits sound exceeding the following limits when measured on adjacent property:*
    a) *Within 15 metres of a building maintained as residence, 130 decibels linear peak sound pressure level;*
    b) *Within 15 metres of a building maintained for use other than as a residence, 150 decibels linear peak sound pressure level; and*
    c) *Where any person other than an employee of the operator is exposed to the sound, 140 decibels linear peak sound pressure level.*

2. ***Clause 44(3):*** *No operator of a quarry shall permit any blasting at the quarry that emits soil-borne vibrations exceeding the following limits when measured on adjacent property inside a building below grade or less than one metre above grade.*

a) For any building maintained as a residence, 12 millimetres per second peak particle velocity; and

b) For any building maintained for use other than a residence, 50 millimetres per second peak particle velocity.

It is recommended that every blast be monitored for vibration and overpressure at minimum of two receptors closest to the blast.

4.3 MMMA Blast Reporting Guidelines and Regulations

Item 45 of the MMMA requires compliance with the following reporting requirements:

1. ***Clause 45(1):*** *An operator of a quarry shall ensure that a log book is maintained for the purpose of recording the following information with respect to blasting on the parcel of land on which the quarry is operated:*

   a) *a sketch of the blast area showing the location, depth, weight and composition of charges and type of arrangement and delay timing of each detonator;*

   b) *the time of each firing;*

   c) *details of the time of and reason for any malfunction or misfiring; and*

   d) *corrective action taken as a result of each malfunction or misfiring.*

2. ***Clause 45(2):*** *An operator of a quarry shall keep the log book maintained under subsection (1) on site and shall make it available for inspection at all reasonable times by:*

   a) *any person authorized by the municipality or local government district in which the blasting takes place; and*

   b) *any employee of the Mines Branch of the Department of Industry, Trade and Mines, the Environmental Stewardship Division of the Department of Conservation or Mines Inspections Branch of the Department of Labour and Immigration.*

   M.R.179/2002

A copy of MMMA, Quarry Minerals Reg. M162-M.R. 65/92, March 20, 1992 is included in Appendix “B”.

4.4 RM of Rosser By-Law No. 8-15 Requirements

Section 13.1.a of Rural Municipality of Rosser consists of following Blasting requirements:

i. *The Quarry Operator shall provide the Municipality a yearly Blasting schedule.*
ii. *The quarry Operator shall provide all surface owners and property owners within 300 feet of the Quarry Operation with a copy of the yearly Blasting schedule.*
iii. *No Person shall engage in Blasting unless prior approval to do so is obtained from the Municipality.*
iv. *A Designated Officer of the Municipality shall be permitted to enter the Quarry Operations or Quarry Site and monitor the Blasting.*
v. *Blasting that exceeds the maximum level of vibration limit as established by provincial regulation or any Environmental Act Licence shall be guilty of an offence against the Quarry Operator set out in Section 19 of this By-Law.*
vi. *Blasting shall only occur in the Quarry Site from Monday to Friday between the hours of 9:00 a.m. to 4:00 p.m.*
vii. *Notwithstanding the aforementioned, there shall be no Blasting on statuary holidays. Emergency Blasting may take place, subject to proper approvals under The Mines and Mineral Act.*

4.5 Power Transmission Tower Structures

For the integrity of the tower structures, we recommend maintaining the vibration levels below 50 mm/s (as per MMMA regulations) for frequencies above 40 Hz in accordance with published research conducted by US Bureau of mines, publication RI8507. Vibrations shall be monitored at the base of the tower when vibration levels are expected to reach 40 mm/s based on prediction calculations.

5.0 BLAST VIBRATION AND OVERPRESSURE PREDICTION CALCULATIONS

In the absence of existing site-specific blast induced vibration data (new quarry) prediction calculations made in this report are based on the International Society of Explosives Engineers (ISEE) recommended attenuation (regression) prediction formulas.

5.1 Vibrations

The most commonly used formula for predicting PPV is known as the Bureau of Mines (BOM) prediction formula or Propagation Law. This formula is used as a standard engineering tool to predict vibration levels induced by the blasting at a given distance from a source of explosion (blast) and is also adopted by the blasting industry. Since the attenuation formula for upper bound typical data recommended by the ISEE is more conservative than the attenuation established by other sources, we have used the site constants recommended by ISEE, with a 95% confidence level, to predict the PPV at the closest third-party structure for a given explosives load per delay period. According to MMMA regulations, blasting cannot be conducted within a minimum standoff distance of 400 m from any third-party residence. Thus, for predictive calculations this minimum distance is used.

$$PPV_{max} = K\,[d \times w^{-1/2}]^{e}$$

Where, PPV = the predicted maximum peak particle velocity (mm/s)

K, e = site factors

d = distance from receptor (m)

w = maximum explosive charge per delay (kg)

The value of K is highly variable and is influenced by many factors (i.e. rock type, geology, thickness of overburden, etc.). Based on the ISEE recommended value the initial estimates for “e” will be set at -1.6 and “K” will be set at 1725. In the absence of site-specific vibration data from proposed quarry, these site factors are used for initial prediction purposes. Based on our experience, in almost all cases, the site-specific vibrations monitored at the time of blasting are generally lower than those predicted.

As indicated in previous section of this report, the intended method of mineral extraction in the proposed licensed area is to employ Continuous Miner Machines. Drilling and blasting will only be employed in areas where massive layers of hard limestone (dolomite) is encountered.

Based on historical geological data (MLi3 Report), the main high-quality mineralization (orebody) occurs approximately in the center of the proposed licensed area. Mineral extraction that may require occasional blasting to loosen massive layers of rock starts in the Phase 1 section (see site plan drawings) and progresses westward. The initial blasting, if required, will therefore occur at the south west corner of Phase 1. The maximum depth of drilling will be limited to 10 m. The closest receptor to initial blasting is located at 9008E Mollard Road at an approximate standoff distance of 500 m. An example of calculations for the initial blasting, for a worst-case scenario is as follows:

For example, for a standoff distance of 500 m a maximum explosives weight of 82.5 kg per delay period (for a max. 102 mm diameter hole, max. 10 m deep and a min. 1.5 m collar), and a **one hole** per delay period detonation, loaded with bulk emulsion explosives of average density 1.20 g/cc, and primed with a 0.35 kg of primer (PETN detonator booster) we can predict the maximum PPV at the closest sensitive receptor.

$PPV_{max} = 1725 [500 X 82.85^{-1/2}]^{-1.6} = 2.84$ mm/s = 0.112 in/s

Similar calculations can be done for non-sensitive receptors, such as hydro tower foundations. The only difference is that the vibration limit for non-sensitive receptors is 50 mm/s.

Maximum allowable quantity of explosives per delay period for various distances to conform to regulatory requirements are presented in Table 1.

Table 1: Maximum allowable explosive load per delay period to conform to MMMA guideline limit for blasting in mines and quarries and Transmission Power Tower guideline Limit Using ISEE recommended regression equation

Distance to Receptor (m)	Max. Explosive/Delay (kg) PPV = 12.0 mm/s MMMA Limit	Max. Explosive/Delay (kg) PPV = 50 mm/s Hydro Tower Limit
50	5.02	29.90
100	20.09	119.60
150	45.20	269.10
200	80.36	478.39
250	125.57	747.49
300	180.81	1076.39
350	246.11	1465.08
400	321.45	1913.58
450	406.83	2421.87
500	502.26	2989.97

It must be noted that since the ISEE regression formula is mainly based on data collected at range of distances closer to the blast, scatter can be clearly noticed in the upper range of distances. It is therefore prudent to rely on the predicted PPV levels in the rages from 50 to 500 m.

Typical calculation summary is included in Appendix “C”.

5.2 Prediction of Overpressure (Noise) Levels

As discussed in previous sections, the MMMA guideline for blast-induced overpressure monitored at the closest sensitive receptor is a maximum of 130 dB(L). Since factors such as climatic conditions affecting the overpressure levels induced by the blasting are highly variable and are not the same on a given day, predicting noise and overpressure based on explosives load is extremely difficult. There are, however, factors that can be controlled and observed, such as length of blast-hole collar, avoidance of blasting on an overcast day and during temperature inversion that can minimize the impact of noise

and overpressure induced by blasting operations. In our experience, attention to these details will result in compliance with the MMMA guidelines for overpressure levels.

As an added benefit, use of Cube-Root Scaling Law for calculating predicted overpressure levels recommended by ISEE for average climatic conditions, explosives confinement for overpressure suppression (minimum 1.5 m collar stemmed with ¾" crushed stone), and a maximum explosives weight per delay period can be used for prediction purposes. An example of this calculation using the same parameters for vibration prediction calculation is presented below.

$$\mathbf{PSPL_{max} = 2.0\ [d\ X\ w^{-1/3}]^{e}}$$

Where, PSPL = peak sound pressure level (kPa)

K, e = site factors, K= 1.0, e= -1.1

d = distance from receptor (m)

w = maximum explosive charge per delay (kg)

For minimum standoff distance of 500 m from a sensitive receptor (residence):

$$\mathbf{PSPL_{max} = 2.0\ [500\ X\ 82.85^{-1/3}]^{-1.1} = 0.0108\ kPa = 10.8\ Pa = 114.65\ dB(L)}$$

Where PSPL in dB(L) = 20 X Log (5XPa) +80

6.0 CALCULATION OF SETBACK DISTANCE FROM FISH HABITAT TO CONFORM TO DFO'S GUIDELINE CRITERIA OF 100 KPA

Based on DFO's formula for calculating a setback distance from fish habitat, knowing the type of substrate and the quantity of explosives per delay period, we can determine the required set back from an existing fish habitat to conform to the guideline of maximum overpressure of 100 kPa in the fish habitat, and PPV of 13.0 mm/s at the shore or along the side of a stream or water body induced by on-shore quarry blasting. As discussed in previous section of this report, the closest identified fish habitat to the proposed quarry site is located at an approximate distance of 6.3 km and will not in anyway be affected

by the blasting operations at this site. In this case during the rehabilitation phases man made fish habitats are introduced, the following setback distance must be complied with:

$$V_R = 100 .0 (R/W^{0.5})^{-1.6}$$

Or after substitutions and solving for R,

$$R = (W^{0.5}) . (K_{rock})$$

Where,

V_R = peak particle velocity (cm/s) = 1.3 cm/s = 13 mm/s

R = distance to detonation point (m)

W = max. charge weight per delay period (kg) = 50.5 kg

K_{rock} = substrate constant = 5.03, for rock

Therefore,

$$R = (82.85^{0.5}) . (5.03) = 45.8 \text{ m}$$

Note: It is assumed that the rock formation being quarried extends under the stream, and thus, the K factor for rock is used in the calculation.

According to the calculation above, a minimum set back distance of 45.8 meters is required for carrying out the blasting while protecting the fish habitat (if future rehabilitation includes a pond which can potentially support fish habitat).

7.0 MITIGATION MEASURES FOR VIBRATION AND OVERPRESSURE

7.1 Vibration Levels

In a typical aggregate quarry, explosives are used for fragmenting rock mass to convert it to usable aggregate. This process may involve drilling and blasting. The energy produced by blasting will produce shockwave which will cause fragmentation of the rock mass surrounding each borehole. The process of blasting will also result in expansion of explosive gases within the fragmented rock mass, tearing apart and displacing the fragments in front of each borehole. A high percentage of the rapid release of chemical

energy will be transformed into ***non-elastic*** vibrations which result in permanent deformation of the rock mass (fragmentation of rock mass occurs) within close proximity of the borehole. A very low percentage of the chemical energy is also transformed in to elastic vibration which will attenuate (dissipate) rapidly with distance as it propagates outward through the earth without causing permanent deformation. Elastic vibration waves below guideline and regulation levels may cause discomfort, but do not cause damage to surrounding rock mass, buildings and structures.

Elastic vibration levels can be mitigated by modifying and controlling the following blast parameters:

- Reduction in quantity of explosives per delay period by decreasing borehole size or bench height and decking charges,
- Reduction in burden and spacing to reduce confinement,
- Reduction in depth of sub-drilling,
- Change in sequencing/delay timing in the blast,
- Change in total blast time,
- Reduction in number of holes per blast,
- Correct use of application of energy factor for rock mass being blasted, and
- Developing a site-specific vibration attenuation curve for the quarry during the initial phase of the extraction operation when blasting is employed.

7.2 Overpressure (Noise) Levels

In addition to elastic vibrations, blasting in quarries and mines will also produce airblast (overpressure) as well as audible noise. Airblast is the low frequency component of air vibrations. Airblast/noise can originate from following sources when a blast is initiated:

- Air Pressure Pulse – Low frequency air vibration due to displacement of rock at the face,
- Rock Pressure Pulse – Localized air vibration induced by vibratory motion of the ground (vibrations),
- Gas Release Pulse – Combination of low and high frequency air vibration produced by venting of explosive gases through fractured rock at the blast,

- Stemming Release Pulse – Air vibration caused by blowout of air pressure from the top region of boreholes due to inadequate stemming column, and
- Noise – High frequency air vibration caused by detonation of detonating cord or surface delays at the top bench.

Production of air vibrations (airblast or overpressure, noise) can be mitigated by following recommended measures:

- Use of sufficient stemming length,
- Use of proper stemming (3/4" crushed stone),
- Observing and detecting depleted burden in the front row at the face and adjusting the explosives loading accordingly,
- Avoiding detonation of blasts in low ceiling (cloudy days) and during periods of temperature inversions,
- Blasting during favourable wind conditions, and
- Using proper blast confinement.

8.0 DETAILS OF RECOMMENDED BLASTING PROCEDURES

We recommend the following procedure for the blasting operations in the proposed quarry:

- Sequential blasting techniques must be used to ensure minimum explosives per delay period is initiated. These include:
    - Non-electric blast initiation systems such as the EZ-Det / Handi-Det / Snap-Det with surface delay systems or,
    - Electronic initiation system with remote detonation.
- Maximum drill-hole diameter for initial quarry blasting will be 102 mm (4"). Vibration and overpressure data acquired during initial blasting may allow for an increase or decrease in drill-hole diameter.
- Maintain a minimum collar (uncharged portion of the borehole) of 1.5 m (5 ft.).
- Keep the bench height to a maximum of 10 m.
- Use clear crushed stone for stemming.

- Use primary and secondary dust collectors on the rock drills to keep the level of rock dust to a minimum.
- Avoid blasting during overcast and temperature inversions.
- Limit explosive charge detonation to a single hole per delay period, and if boreholes are decked, a single explosive deck per period.
- Limit quantity of explosives per delay period for initial quarry blasting to a maximum of 82.85 kg.

A typical blasting layout is also attached in Appendix “C”.

9.0 IMPACT OF BLASTING ON WATER-WELLS

The effects of blast-induced vibrations on water wells have been studied by several mine operators and blasting consultants. In a study by Froedge (1983), blast vibration levels of up to 32.3 mm/s were recorded at the bottom of a shallow well located at a distance of 60 meters (200 feet) from an open pit blast. There was no report of visible damage to the well, nor was there any change in the water pumping flow rate. This study concluded that the commonly accepted limit of 50 mm/s PPV level is adequate to protect wells from any appreciable damage.

Rose et al. (1991), studied the effect of blasting in close proximity to water wells near an open pit mine in Nevada, USA. Blasts of up to 70 kilograms of explosives per delay period were detonated at a distance of up to 75 meters (245 feet) from a deep water well. There was no reported visible damage to the well. Fluctuations in water level and flow rate were evident immediately after the blast. However, the well water level and flow rate stabilized after a few days.

Matheson et al. (1997) brought together available information on the most common complaints, the possible causes of the complaints and the relation between blasting and the complaint causes. This publication stated:

> “Probably the most frequent blast related complaint is that a well has ‘gone dry’. Related complaints about reductions in ground water quantity are also

common. Blasting does not cause wells to go dry or reduce the water quantity available to a well. Research has shown that blasting near open borehole wells in bedrock may actually increase the water production capacity due to opening rock fractures.

The major complaints for changes in well water production capacity include: loss of quantity production, air in water and/or water lines, damage to pump, and damage to well screen or borehole.

The review of research and common causes of these problems indicates that most of these complaints are not related to blasting and can be shown to be related to either environmental factors, poor well construction, or wells whose elements required repair or replacement prior to blasting."

Based on observations and research, it is our professional opinion that vibrations produced by the blasting operations at the quarry proposed by the North Perimeter Aggregates Quarry will not affect the water wells in the area.

10.0 RECOMMENDATIONS

As it is implied by the regression equations discussed in previous sections, the most critical factors in controlling the vibrations, and to a lesser degree, overpressure levels from blasting is the distance and the maximum quantity of explosives per delay period since the predicted PPV and PSPL are directly proportional to the weight of explosives and inversely proportional to the distance. Since the distance cannot be changed from a given blast to a receptor, one can reduce the quantity of explosives per delay period to maintain the vibration levels below the acceptable levels. Reducing the quantity of explosives per delay period can be achieved by implementing combination or any one of the following measures:

- Reducing the blast-hole depth by a reduction in the bench height,
- Using multiple deck charges within the same blast-hole, and
- Reducing the blast-hole diameter with appropriate drill pattern.

For example, a reduction in a blast-hole diameter from 102 mm to 89 mm loaded with bulk emulsion explosives, would reduce the explosives weight per borehole significantly. Similarly, by introducing an extra deck (2 decks per hole), the quantity of explosives per delay period can be reduced to less than half, provided the delay per deck in the same blast-hole are different.

As indicated by the regression formula and the Table 1 in Section 5, provincial guidelines may be easily complied with when blasting occurs beyond 400 m from the closest inhabited building provided weight of explosive charges are maintained within those recommended.

We recommend implementing a vibration monitoring program for development of a site-specific attenuation relation under controlled conditions. This can be achieved during blasting operations carried out during the first phase of the blasting operations. A qualified blasting consultant can assist in establishing the procedure for collecting reliable data for this purpose.

All production blasts should be monitored for both vibration and overpressure (noise) levels at two closest receptors with digital seismographs. Compilation of the vibration and overpressure data in the initial phase of extraction can be used to assist in planning for subsequent blasting. This will also allow subsequent blasts to be designed specifically for this location and well within MMMA guidelines and regulations.
Seismographs should be self-triggering units capable of recording a complete waveform for blast overpressure and blast vibrations in three orthogonal directions (Instantel Digital Seismograph or equivalent).

Detailed blast records should be maintained. We recommend that the body of blast reports include the following information:

a) Location, date and time of the blast.
b) Dimensional sketch including photographs, if necessary, of the location of the blasting operation, and the nearest point of reception.

c) Physical and topographical description of the ground between the source and the receptor location.
d) Type of material being blasted.
e) Sub-soil conditions, if known.
f) Prevailing meteorological conditions including wind speed in m/s, wind direction, air temperature in ^{o}C, relative humidity, degree of cloud cover and ground moisture content.
g) Number of drill holes.
h) Pattern of drill holes.
i) Size of holes.
j) Depth of drilling.
k) Depth of collar.
l) Depth of toe-load if any.
m) Weight of charge per delay period.
n) Number and time of delays.
o) The recorded Peak Sound Pressure Level (PSPL) in dB(L) and Peak Particle Velocity (PPV) in mm/s.
p) Applicable limits.
q) The excess, if any, over the prescribed limits.

The blast parameters described within this report will provide a good basis for the initial blasting operations at the proposed North Perimeter Aggregates Quarry. However, it may be possible to refine these parameters once site-specific vibration and overpressure data from the blasting operation becomes available.

Blasting procedures such as drilling and loading should be audited on an occasional basis by an independent blasting consultant to ensure full compliance with governing guidelines and regulations.

11.0 CLOSURE

The North Perimeter Aggregates Quarry can be developed safely and productively in the proposed licenced area, while staying within the MMMA guidelines and regulations for

blasting in mines and quarries as well as regulations of the Department of Fisheries and Oceans provided the quarry operator follows all recommendations in this report. The proposed design calculations will allow for changes in the drilling and blasting parameters to allow for implementation of blasting practices which will be consistent with the ongoing improvements in explosives, initiation technology and blasting practices.

12.0 REFERENCES

Froedge, D. T., "Blasting Effects on Water Wells", Proceedings of the Ninth Conference on Explosives and Blasting Technique", Dallas, Texas, 1983.

Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters, Canadian Technical Report of Fisheries and Aquatic Sciences 2107, Department of Fisheries and Oceans (DFO), Canada, 1998.

International Society of Explosives Engineers (ISEE), 17th Edition of the Blaster's Handbook" Chapter 38, 1998.

Matheson, G. M., Miller, D. K., "Blasting Vibration Damage to Water Supply, Well Water Quality and Quantity", Proceedings of the Twenty-Third Conference on Explosives and Blasting Technique", Las Vegas, Nevada, 1997.

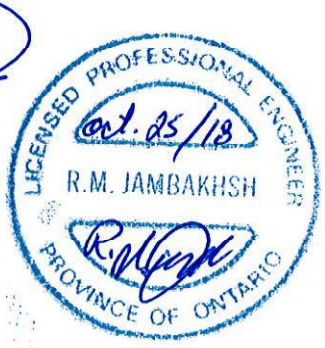
Manitoba Mines and Minerals Act, Quarry Minerals Reg. M162-M.R. 65/92, March 20, 1992.

Rose, R., Bowles, B., Bender, W. L., "Results of Blasting in Close Proximity to Water Wells at the Sleeper Mine", Proceedings of the Seventeenth Conference on Explosives and Blasting Technique", Las Vegas, Nevada, 1991.

A copy of writer's resume is attached in Appendix "D" for your records.

Sincerely,

For **DST CONSULTING ENGINEERS INC.**,

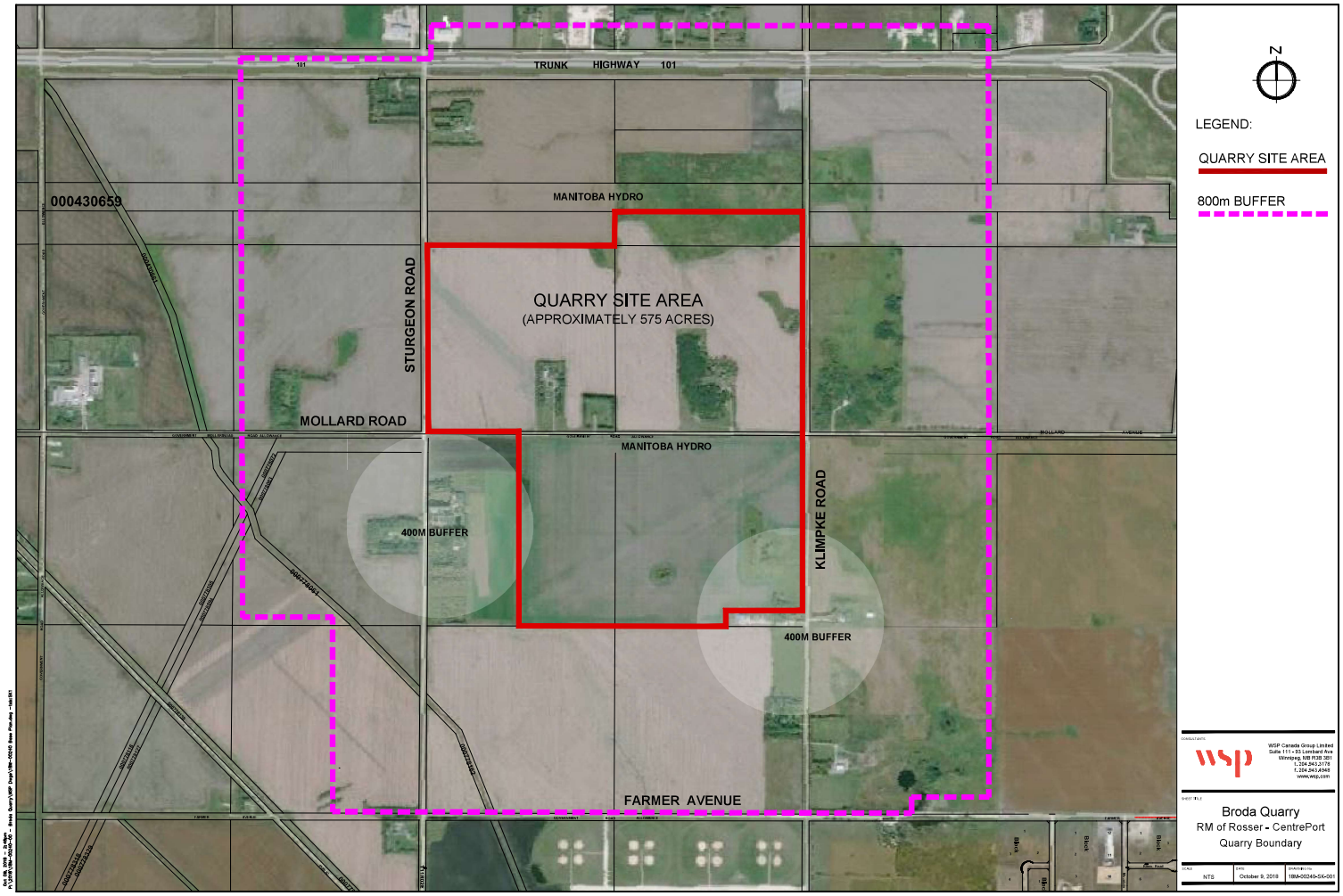


Ray Jambakhsh, M.Sc., P. Eng. (Ontario)
Chief Technical Advisor, Sr. Principal

Append.

Appendix "A"

- Site Plan Drawings and Aerial View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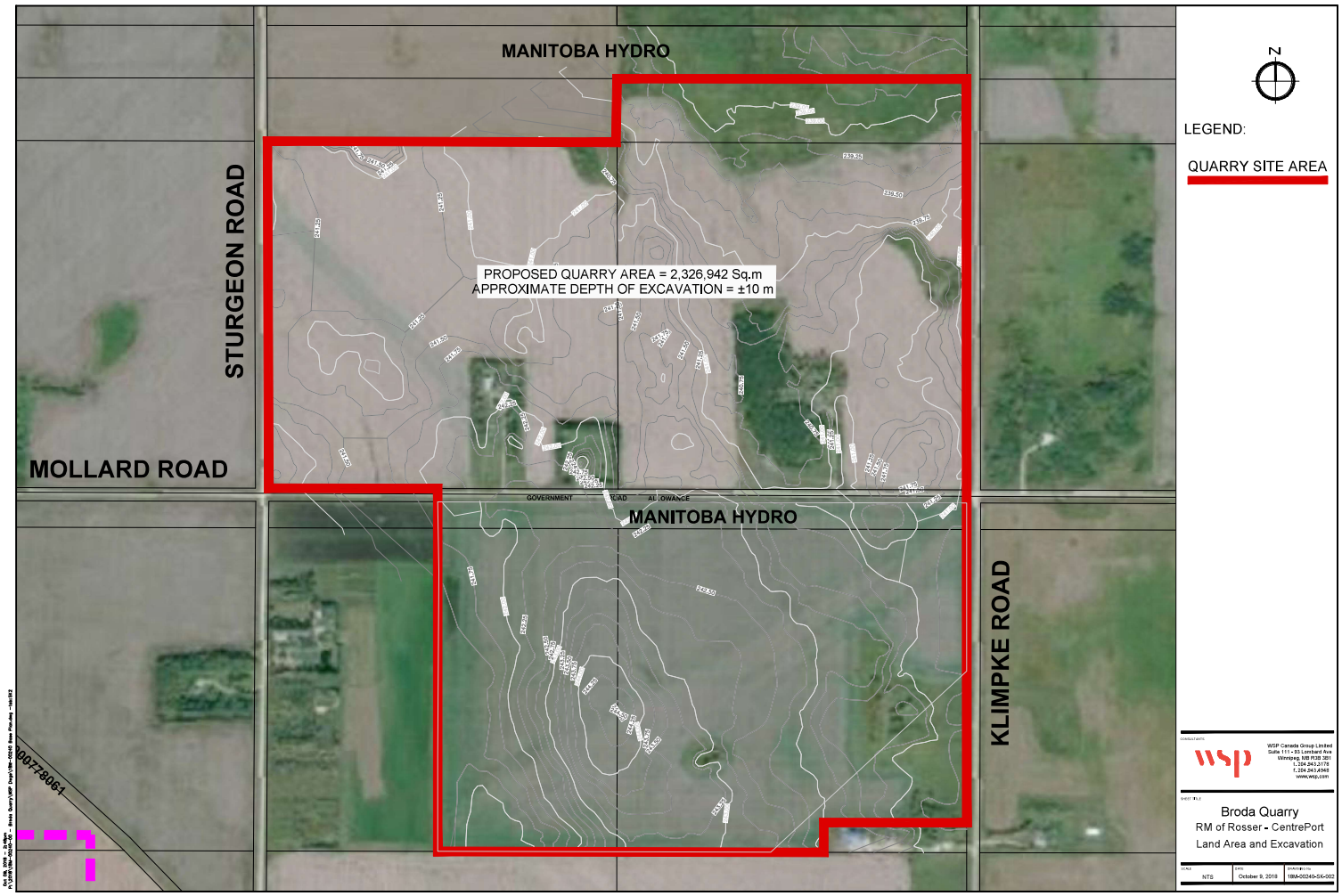
STURGEON ROAD
QUARRY SITE AREA
(APPROXIMATELY 575 ACRES)
MOLLARD ROAD
MANITOBA HYDRO
KLIMPKE ROAD
400M BUFFER
400M BUFFER
FARMER AVENUE
N
LEGEND:
QUARRY SITE AREA
800m BUFFER
WSP Canada Group Limited
Suite 111 - 93 Lombard Ave
Winnipeg, MB R3B 3B1
t. 204.943.2779
f. 204.943.4948
www.wsp.com
Broda Quarry
RM of Rosser - CentrePort
Quarry Boundary
NTS
October 9, 2018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GOVERNMENT ROAD ALLOWANCE
MANITOBA HYDRO
KLIMPKE ROAD
N
LEGEND:
QUARRY SITE AREA
WSP Canada Group Limited
Suite 111 - 93 Lombard Ave
Winnipeg, MB R3B 3B1
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f. 204.943.4948
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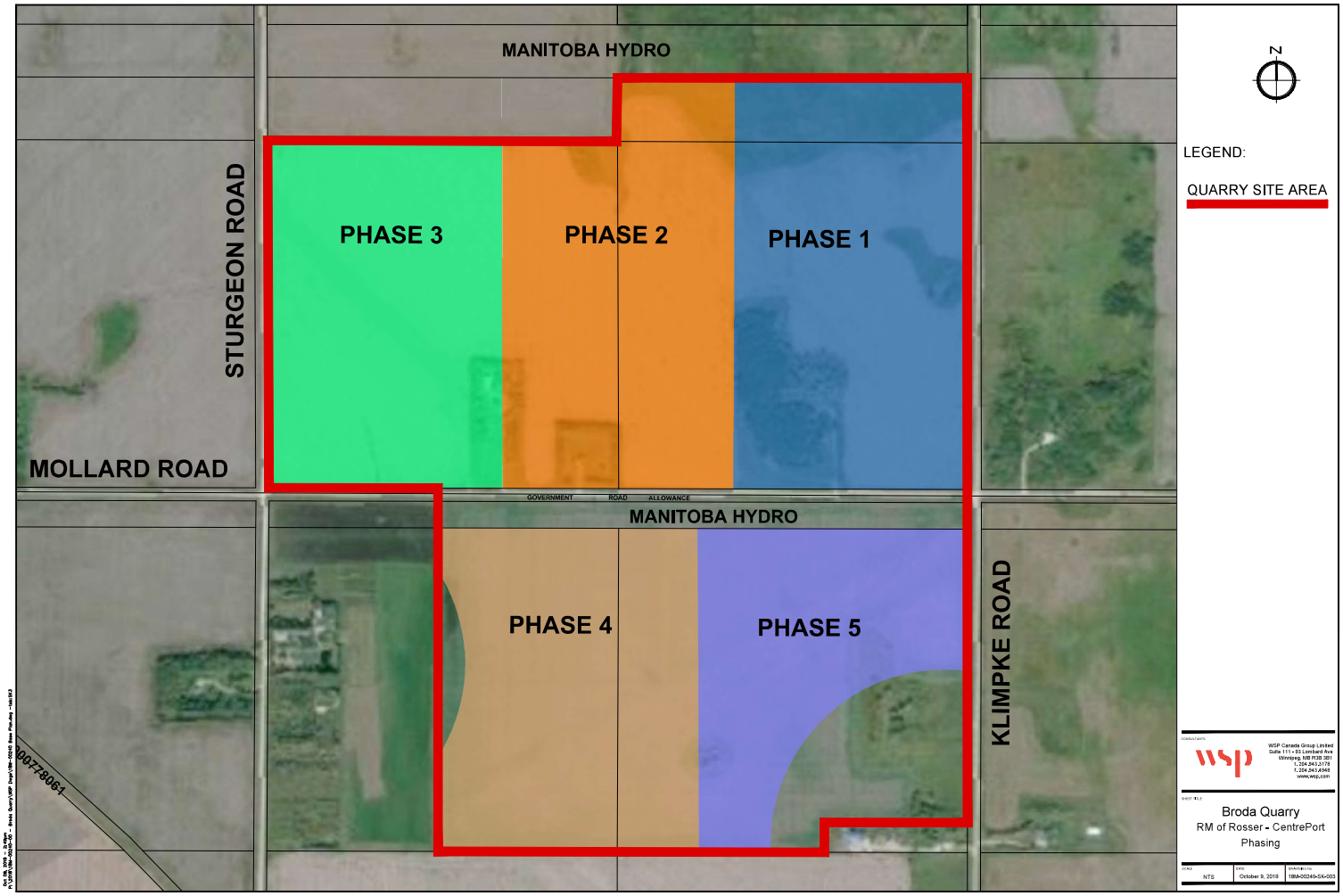
RM of Rosser - CentrePort
Land Area and Excavation
NTS
October 9, 2018
191A-00240-SK-002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PHASE 2
PHASE 1
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GOVERNMENT ROAD ALLOWANCE
MANITOBA HYDRO
PHASE 4
PHASE 5
KLIMPKE ROAD
N
LEGEND:
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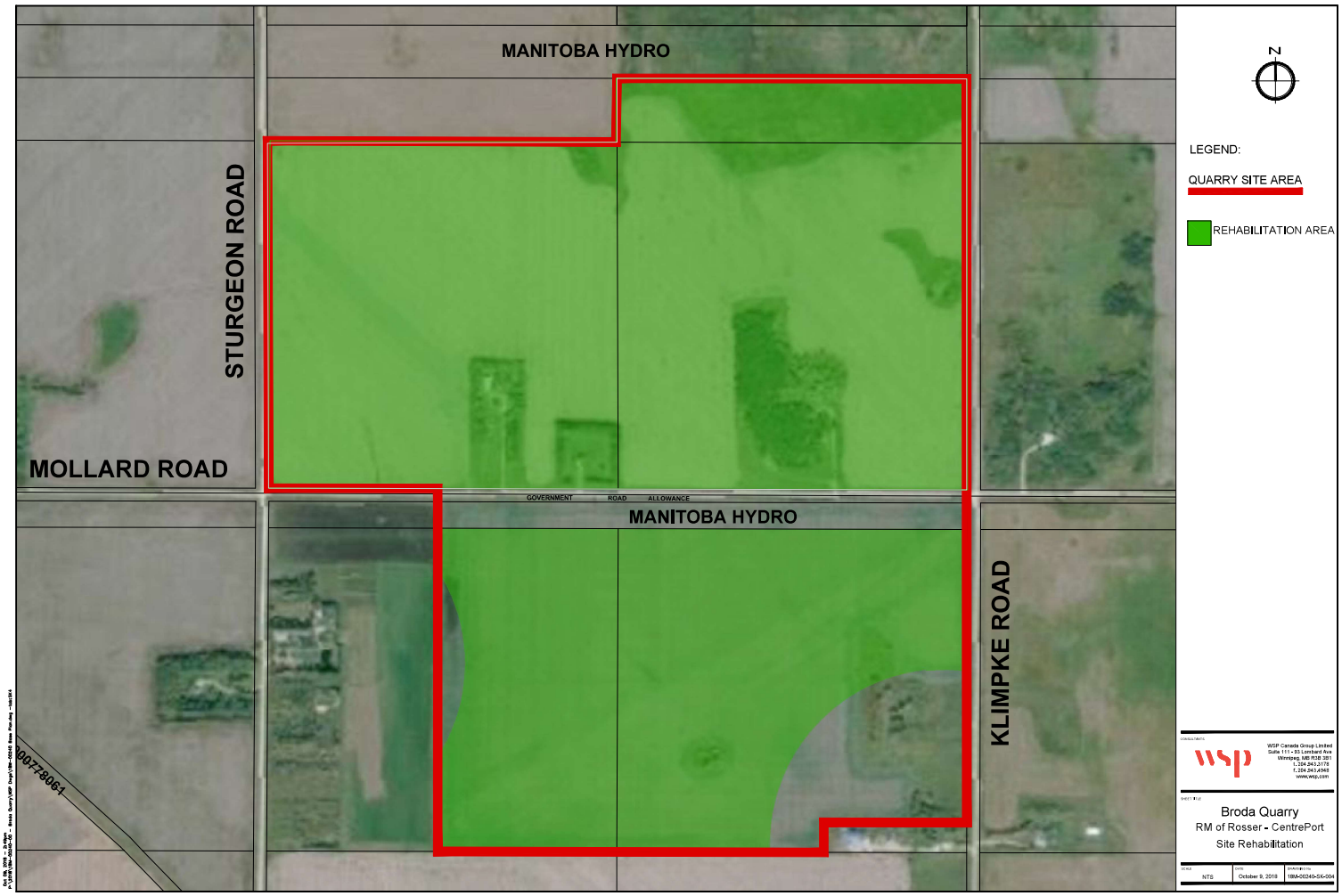
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Site Rehabilitation
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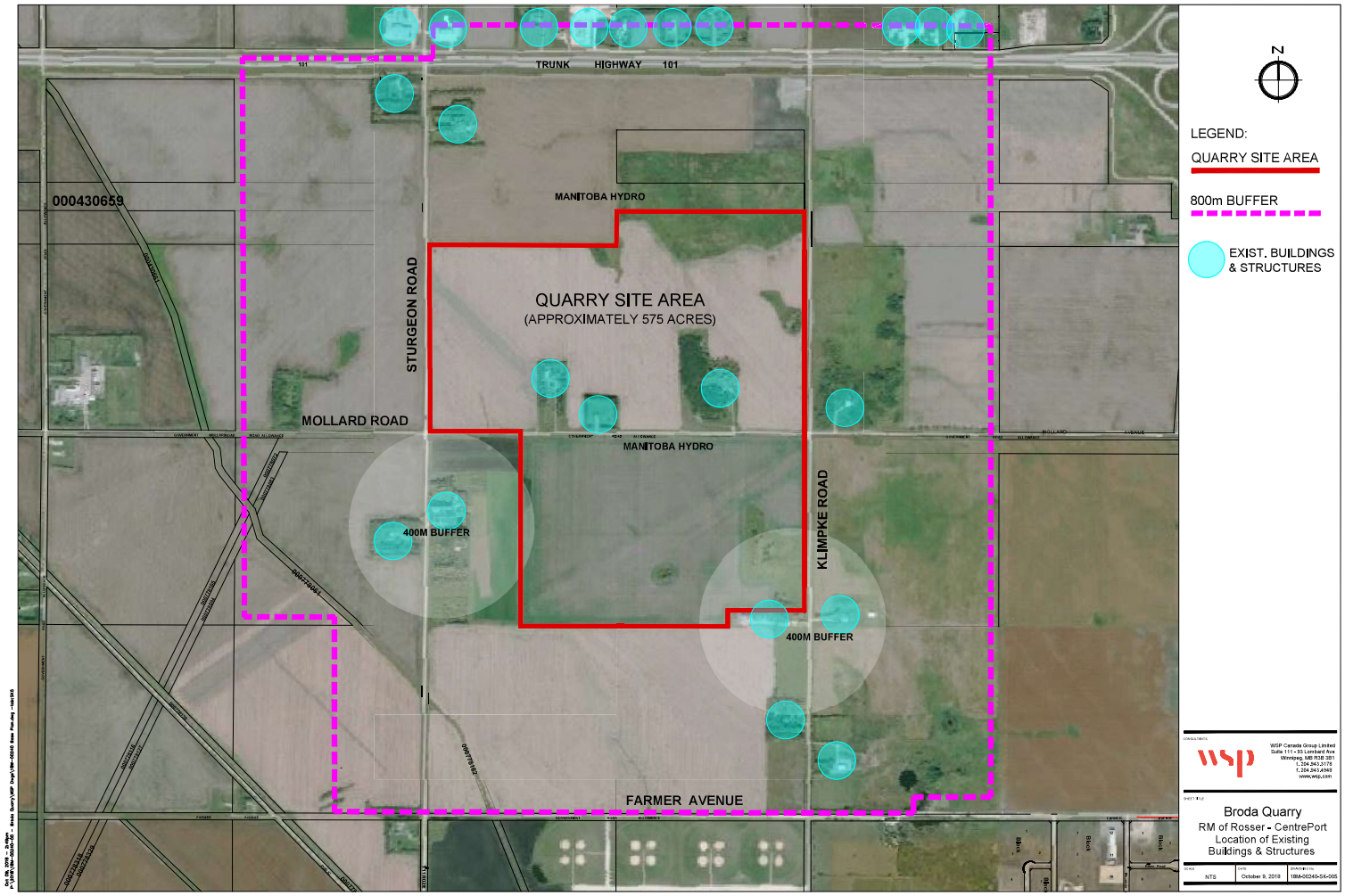
October 9, 2018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STURGEON ROAD
QUARRY SITE AREA
(APPROXIMATELY 575 ACRES)
MOLLARD ROAD
MANITOBA HYDRO
KLIMPKE ROAD
400M BUFFER
400M BUFFER
FARMER AVENUE
N
LEGEND:
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800m BUFFER
EXIST. BUILDINGS & STRUCTURES
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t. 204.943.3779
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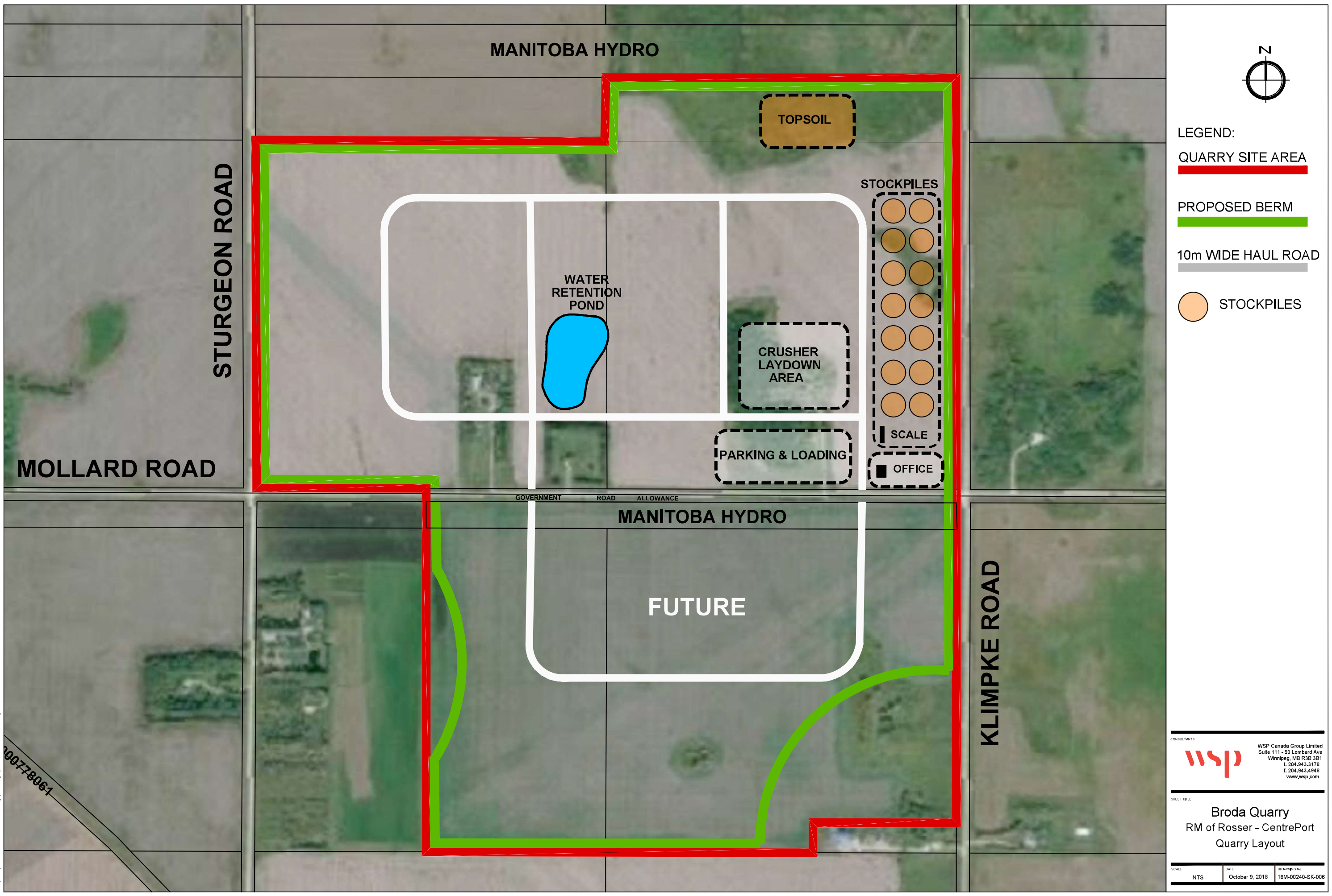
Broda Quarry
RM of Rosser - CentrePort
Location of Existing
Buildings & Structures
NTS
October 9, 2018
191A-00240-SK-005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STOCKPILES
WATER
RETENTION
POND
CRUSHER
LAYDOWN
AREA
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PARKING & LOADING
OFFICE
STURGEON ROAD
MOLLARD ROAD
GOVERNMENT ROAD ALLOWANCE
MANITOBA HYDRO
FUTURE
KLIMPKE ROAD
200778061
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LEGEND:
QUARRY SITE AREA
PROPOSED BERM
10m WIDE HAUL ROAD
STOCKPILES
CONSULTANTS
WSP Canada Group Limited
Suite 111 - 93 Lombard Ave
Winnipeg, MB R3B 3B1
t. 204.943.3178
f. 204.943.4948
www.wsp.com
SHEET TITLE
Broda Quarry
RM of Rosser - CentrePort
Quarry Layout
SCALE
NTS
DATE
October 9, 2018
DRAWING No
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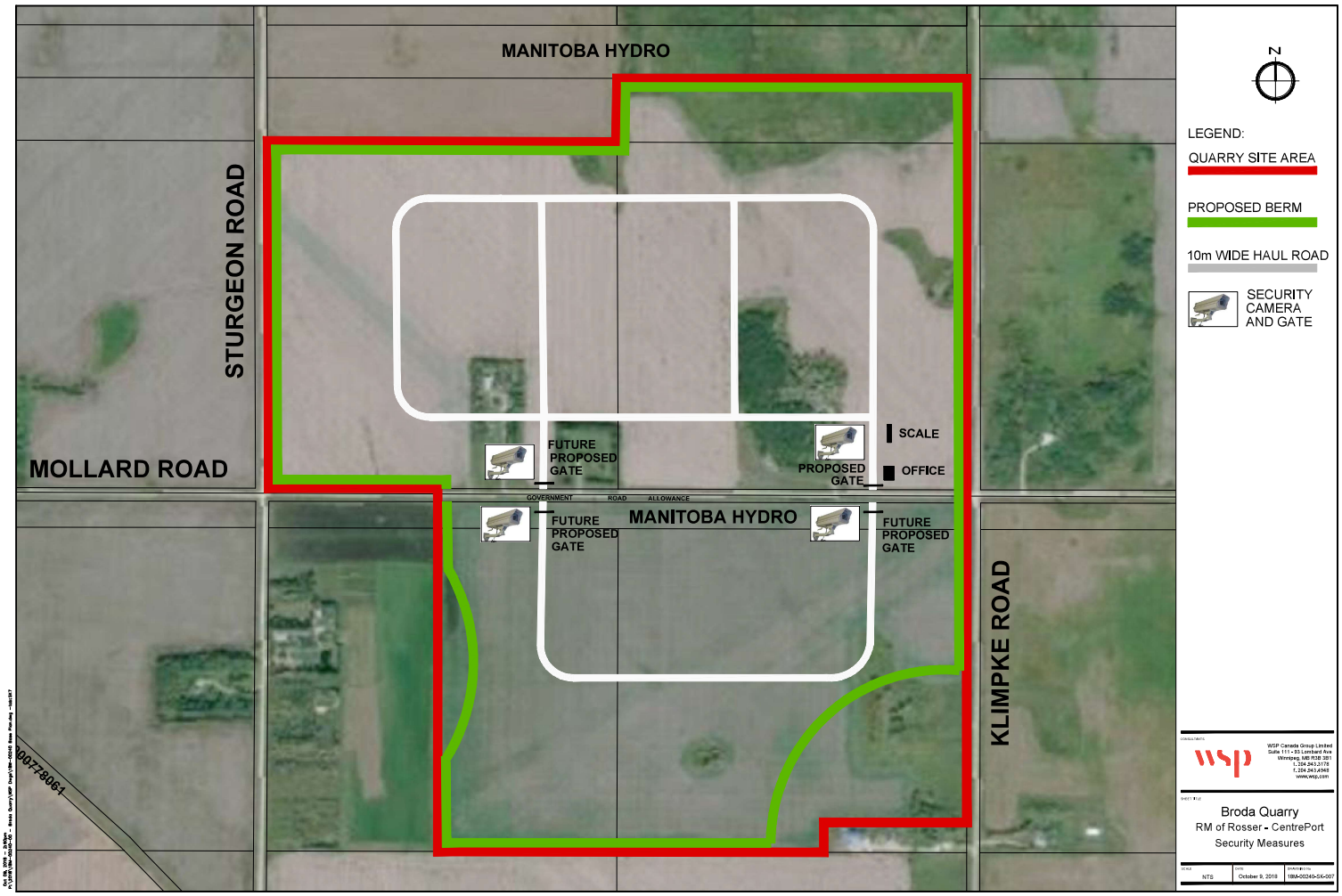
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GOVERNMENT ROAD ALLOWANCE
MANITOBA HYDRO
FUTURE PROPOSED GATE
FUTURE PROPOSED GATE
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LEGEND:
QUARRY SITE AREA
PROPOSED BERM
10m WIDE HAUL ROAD
SECURITY CAMERA AND GATE
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WSP Canada Group Limited
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f. 204.943.4948
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Broda Quarry
RM of Rosser - CentrePort
Security Measures
NTS
October 9, 2018
191A-00240-SK-007


Proposed Quarry
Thir Party Sensitive Receptors
Legend
R1,9 - Receptors
R1
R2
R3
R4
R5
R6
R7
R8
R9
Mallard Rd
Sturgeon Rd
Kilmpke Rd
Farmer Ave
Brookside Blvd
Jefferson Ave
Ronn Rd
1 km
N
Google Earth
©2018 Google

Appendix "B"

- Manitoba Mines and Minerals Act and RM of Rosser Aggregate Quarry Bylaw 8-15

THE MINES AND MINERALS ACT
(C.C.S.M. c. M162)

Quarry Minerals Regulation, 1992

LOI SUR LES MINES ET LES MINÉRAUX
(c. M162 de la C.P.L.M.)

Règlement de 1992 sur les minéraux de carrière

Regulation 65/92
Registered March 20, 1992

Règlement 65/92
Date d'enregistrement : le 20 mars 1992

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PART 4
SURFACE LEASE

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PART 5
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PART 1

GENERAL

Definitions

1(1) In this regulation,

"**Act**" means *The Mines and Minerals Act*; (« Loi »)

"**borrow pit**" means a pit established and operated exclusively for the purpose of removing an unconsolidated and unprocessed quarry mineral for use as fill or for subgrade construction of embankments or roads regardless of the physical properties of the quarry mineral; (« carrière d'emprunt »)

"**casual quarry permit**" means an authorization in writing for the production of a specified quantity of quarry mineral pursuant to Division 1 of Part 2; (« licence d'exploitation occasionnelle de carrière »)

"**quarry exploration permit**" means an authorization in writing to explore for a specified quarry mineral pursuant to Division 2 of Part 2; (« licence d'exploration de carrière »)

PARTIE 1

GÉNÉRALITÉS

Définitions

1(1) Les définitions qui suivent s'appliquent au présent règlement.

« **carrière d'emprunt** » Carrière ouverte et exploitée dans le but exclusif d'y extraire des minéraux de carrière non consolidés et non traités devant servir de matériaux de remblayage ou de fondation pour les talus ou les routes, sans égard aux propriétés physiques des minéraux. ("borrow pit")

« **licence d'exploration de carrière** » Autorisation écrite d'explorer pour trouver un minéral de carrière précis conformément à la section 2 de la partie 2. ("quarry exploration permit")

« **licence d'exploitation occasionnelle de carrière** » Autorisation écrite d'extraire une quantité précise de minéraux de carrière conformément à la section 1 de la partie 2. ("casual quarry permit")

« ***Loi*** » La *Loi sur les mines et les minéraux*. ("Act")

"**surveyed territory**" means all that portion of the Province of Manitoba situated south of the 53rd parallel and which has been surveyed into sections, townships, and ranges, or into Parish and Settlement Lots on plans of survey approved and confirmed by the Surveyor General of Canada or the Director of Surveys of Manitoba; (« territoire arpenté »)

"**unsurveyed territory**" means any area of the Province of Manitoba that is not surveyed territory. (« territoire non arpenté »)

M.R. 250/96; 179/2002

« territoire arpenté » La partie du Manitoba située au sud du 53e parallèle et qui a été subdivisée en sections, en townships et en rangs ou en paroisses et en lots de colonisation sur des plans d'arpentage approuvés par l'Arpenteur en chef du Canada ou le directeur des Levés du Manitoba. ("surveyed territory")

« territoire non arpenté » Toutes les régions du Manitoba non comprises dans le territoire arpenté. ("unsurveyed territory")

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1(2) For the purpose of this regulation and clause (c) in the definition "quarry mineral" in subsection 1(1) of the Act, amber is a quarry mineral.

M.R. 250/96

1(2) Pour l'application du présent règlement et de l'alinéa c) de la définition de « minéraux de carrière », au paragraphe 1(1) de la *Loi*, l'ambre fait partie des minéraux de carrière.

R.M. 250/96

Application of regulation
1.1 This regulation does not apply to borrow pits.

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Application du règlement
1.1 Le présent règlement ne s'applique pas aux carrières d'emprunt.

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Extension of time-cash deposits
2 Where the minister grants an extension of time pursuant to the Act, the cash deposit payable by the applicant shall be $5,000.00 for each application, but in no case shall the period of extension exceed 90 days.

Prorogation du délai s'appliquant aux dépôts
2 Lorsque le ministre accorde une prorogation de délai conformément à la *Loi*, le dépôt payable par le demandeur pour chaque demande est de 5 000 $. Toutefois, la période de prorogation ne saurait être supérieure à 90 jours.

Confidentiality
3 Reports of work submitted in accordance with this regulation shall not be available to the public except

(a) with the consent of the holder; or

(b) upon the abandonment, lapse or surrender of the quarry mineral disposition;

and, with the consent of the holder, may be used in government publications.

Confidentialité
3 Les rapports des travaux produits conformément au présent règlement ne sont pas accessibles au public sauf :

a) si le titulaire y consent;

b) à l'abandon, à la déchéance ou à la cession de l'aliénation de minéraux de carrière.

Ces rapports peuvent également être utilisés dans les publications gouvernementales si le titulaire y consent.

Investigation by recorder
4 An application for a quarry mineral disposition that is not in accordance with this regulation or contains any errors or mis-statements or is for an area of land already included in an existing recorded quarry mineral disposition shall be held by the recorder pending investigation.

Decision of recorder
5 When the recorder holds an application in accordance with section 4 he shall, following investigation, either

(a) record the quarry mineral disposition; or

(b) advise the applicant that the disposition applied for cannot be recorded.

Default
6 Where an inspector submits a report in writing to a recorder that indicates the work performed does not conform to the work reported, the recorder shall notify the quarry mineral disposition holder of the discrepancy; and the holder shall remedy the discrepancy within the time set out in the notice.

Quarry mineral disposition open for acquisition
7 Where the minister does not, under section 132 of the Act, dispose of all or part of an expired, surrendered or cancelled quarry mineral disposition by tender, it shall be open for acquisition as a quarry mineral disposition from and after 12:00 o'clock noon of the day following the expiry, surrender or cancellation.

Exemption from royalties
8(1) Crown quarry mineral removed by a public agency and used for a public purpose is exempt from payment of the royalties required under clause 12(2)(d) and section 25.

8(2) Crown quarry mineral removed by a contractor or subcontractor on behalf of a public agency and used for a public purpose is exempt from payment of the royalties required under clause 12(2)(d) and section 25 where the public agency certifies in an exemption certificate prepared on a form furnished by the recorder that the quarry mineral has been used for a public purpose.

Enquête du registraire
4 Le registraire retient, en attendant les résultats de l'enquête, les demandes d'aliénation de minéraux de carrière qui ne sont pas conformes aux prescriptions du présent règlement, qui contiennent des erreurs ou des renseignements inexacts ou qui visent une zone de bien-fonds qui fait déjà l'objet d'une aliénation de minéraux de carrière enregistrée.

Décision du registraire
5 Lorsqu'il retient une demande en application de l'article 4, le registraire décide, une fois l'enquête terminée :

a) soit d'enregistrer l'aliénation de minéraux de carrière;

b) soit d'aviser le demandeur que l'aliénation demandée ne peut être enregistrée.

Incompatibilité des travaux
6 Lorsqu'il reçoit d'un inspecteur un rapport écrit indiquant que les travaux exécutés ne correspondent pas à ceux qui ont été déclarés, le registraire avise le titulaire de l'aliénation de minéraux de carrière de l'incompatibilité et ce dernier y remédie au cours du délai imparti dans l'avis.

Acquisition des aliénations de minéraux de carrière
7 Les aliénations de minéraux de carrière expirées, cédées ou annulées que le ministre n'aliène pas, en tout ou partie, par voie de soumission en application de l'article 132 de la *Loi* sont sujettes à acquisition à titre d'aliénations de minéraux de carrière à compter de midi le jour suivant leur expiration, cession ou annulation.

Exemption de redevances
8(1) Les minéraux de carrière domaniaux extraits par un organisme public et utilisés à des fins d'utilité publique sont exempts des redevances prévues à l'alinéa 12(2)d) et à l'article 25.

8(2) Les minéraux de carrière domaniaux extraits par un entrepreneur ou un sous-traitant pour le compte d'un organisme public sont exempts des redevances prévues à l'alinéa 12(2)d) et à l'article 25 pourvu que l'organisme public atteste, à l'aide d'un certificat d'exemption que lui fournit le registraire, que les minéraux en question ont été utilisés à des fins d'utilité publique.

8(3) The holder of a quarry mineral disposition shall submit to the recorder any exemption certificate referred to in subsection (2) together with

(a) an annual statement showing the total quantity of quarry mineral removed; and

(b) payment of the royalty due on the quantity of quarry mineral, if any, not used for a public purpose.

8(4) Where the holder of a quarry mineral disposition fails to submit to the recorder an exemption certificate referred to in subsection (2), the holder shall submit the required royalty payment for the total quantity of quarry mineral removed.

Application
9 An application for the transfer or assignment of a quarry exploration permit or a quarry lease shall be made in writing, in duplicate, to the recorder and shall be accompanied by the fee prescribed therefor in Schedule A.

Interest payable on debt or overpayment
10(1) The interest payable on a debt to the Crown in accordance with subsection 181(1) of the Act shall be calculated from the 31st day following the due date specified in the invoice or written request for payment, at a rate prescribed by the Minister of Finance on January 1 and July 1 of each year under *The Financial Administration Act* in respect of persons who owe or are liable to pay money to the government.

M.R. 250/96

10(2) The interest payable by the minister on an overpayment in accordance with subsection 181(2) of the Act shall be calculated from the date on which the overpayment is made,at the same rate as under subsection (1).

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10(3) Where the interest accrued is less than $10., the minister shall neither demand nor pay the interest.

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8(3) Les titulaires d'une aliénation de minéraux de carrière remettent au registraire les certificats d'exemption visés au paragraphe (2) et :

a) un relevé annuel indiquant la quantité totale de minéraux de carrière qui a été extraite;

b) le paiement des redevances exigibles à l'égard de la quantité des minéraux de carrière qui n'a pas été utilisée, le cas échéant, à des fins d'utilité publique.

8(4) Les titulaires d'une aliénation de minéraux de carrière qui ne remettent pas au registraire le certificat d'exemption visé au paragraphe (2) doivent payer les redevances exigibles à l'égard de la totalité des minéraux de carrière qui a été extraite.

Demandes
9 Les demandes de transfert ou de cession de licences d'exploration de carrière ou de baux d'exploitation de carrière se font par écrit et en double exemplaire au registraire et doivent être accompagnées des droits réglementaires prévus à l'annexe A.

Intérêts à payer sur les dettes ou les trop-payés
10(1) Les intérêts à payer sur les dettes envers la Couronne en application du paragraphe 181(1) de la *Loi* sont calculés à compter du 31e jour qui suit la date de leur exigibilité précisée dans la facture ou dans la demande écrite de paiement, au taux que fixe le 1er janvier et le 1er juillet de chaque année en vertu de la *Loi sur l'administration financière* à l'égard des personnes qui doivent des sommes au gouvernement ou qui lui sont redevables de celles-ci.

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10(2) Les intérêts payables par le ministre sur les trop-payés en application du paragraphe 181(2) de la *Loi* sont calculés à compter de la date de leur versement, au taux fixé au paragraphe (1).

R.M. 250/96

10(3) Le ministre n'exige pas ou ne paie pas les intérêts accumulés qui s'élèvent à moins de 10 $.

R.M. 250/96

Submission of applications

10.1 An application under this regulation may be submitted to the recorder or director

(a) by submitting an original application to the office of the recorder or director during regular business hours;

(b) by facsimile transmission if

(i) the recorder or director has issued a public notice indicating that the application in question may be submitted by facsimile transmission,

(ii) the cover page of the facsimile transmission contains all information required by the recorder or director, and

(iii) the facsimile transmission is sent to a specified facsimile number intended to receive the application in question; or

(c) through the use of the form provided, if any, on an Internet site specified by the recorder, in accordance with the terms and conditions of use listed on the site.

M.R. 179/2002; 201/2011

When applications filed

10.2(1) An application received in paper form or electronically under section 10.1 is deemed to be filed at the later of the following times:

(a) the time the application, in a complete and legible form, is received;

(b) if fees, cash deposits or rent are required to be paid to the recorder, director or minister in respect of the application, the time all applicable application fees, cash deposits and rent are received in the office of the recorder, director or minister.

M.R. 179/2002; 201/2011

Dépôt d'une demande

10.1 Il est possible de présenter une demande au registraire ou au directeur en vertu du présent règlement, selon le cas :

a) en déposant l'original de la demande au bureau du registraire ou du directeur pendant les heures normales d'ouverture;

b) en la faisant parvenir par télécopieur si :

(i) le registraire ou le directeur a avisé le public qu'elle peut être présentée de cette façon,

(ii) la page couverture du message contient tous les renseignements dont a besoin le registraire ou le directeur,

(iii) le message est envoyé à un numéro de télécopieur destiné expressément à la réception d'une telle demande;

c) en utilisant, le cas échéant, la formule fournie à cette fin sur un site Internet qu'indique le registraire conformément aux modalités d'utilisation du site.

R.M. 179/2002; 201/2011

Demandes — moment de la réception

10.2(1) Toute demande reçue sur support papier ou sur support électronique en vertu de l'article 10.1 est réputée avoir été reçue :

a) au moment de sa réception, la demande étant dûment remplie et lisible;

b) si ce moment est ultérieur, au moment de la réception des droits, des dépôts de garantie et des loyers qui doivent l'accompagner au bureau du registraire, du directeur ou du ministre.

R.M. 179/2002; 201/2011

10.2(2) For the purposes of this section, application fees, cash deposits and rent are deemed to be received at the same time as the application submitted electronically if

(a) the electronic submission contains

(i) an authorization from the applicant permitting the total amount of fees, deposits and rent to be charged to the applicant's credit card, if the terms and conditions of use listed on the Internet site, or the director, recorder or minister, indicate that payment by that type of credit card will be accepted,

(ii) all information required to process payment by credit card; and

(b) payment for the total amount of fees, deposits and rent is promptly processed by the credit card issuer.

M.R. 179/2002; 201/2011

10.2(3) An application submitted electronically will not be processed

(a) until all applicable application fees, cash deposits and rent are received; and

(b) if the application received is incomplete or illegible.

M.R. 179/2002; 201/2011

10.3 Repealed.

M.R. 179/2002; 201/2011

10.2(2) Pour l'application du présent article, les droits de demande, les dépôts de garantie et les loyers sont réputés avoir été reçus au même moment que la demande transmise électroniquement si :

a) elle contient :

(i) une autorisation du demandeur permettant la facturation de ces montants à la carte de crédit de ce dernier, si le type de carte est conforme aux modalités d'utilisation du site ou si le directeur, le registraire ou le ministre précise que ce mode de paiement est acceptable,

(ii) les renseignements nécessaires au paiement par carte de crédit;

b) l'émetteur de la carte de crédit traite rapidement le paiement intégral des montants en question.

R.M. 179/2002; 201/2011

10.2(3) Toute demande présentée électroniquement n'est traitée :

a) qu'au moment de la réception des droits de demande, des dépôts de garantie et des loyers applicables;

b) que si elle est complète et lisible.

R.M. 179/2002; 201/2011

10.3 Abrogé.

R.M. 179/2002; 201/2011

Continues on page 7.

Suite à la page 7.

PART 2

QUARRY PERMITS

DIVISION 1

CASUAL QUARRY PERMIT

Application

11 An application for a casual quarry permit shall be made to the recorder in writing, on a form furnished by the recorder, and shall be accompanied by

(a) the application fee prescribed therefor in Schedule A;

(b) the legal land description of the area applied for where the area is in surveyed territory;

(c) a plan or map showing the location of the area applied for where the area is in unsurveyed territory; and

(d) a description of the nature and location of any prominent feature in the area applied for, including any structures, roads, trails and other improvements.

Casual quarry permit

12(1) A casual quarry permit authorizes the holder to produce, during the period specified in the permit, the quantity of quarry mineral specified in the permit.

12(2) The holder of a casual quarry permit shall

(a) comply with such terms and conditions as are stated in the permit;

(b) keep an accurate daily record of the quantity of quarry mineral produced from the permit area;

(c) provide the recorder, on a form furnished by the recorder, with an accurate statement of the total quantity of quarry mineral produced from the permit area no later than the 30th day following the expiry, surrender or cancellation of the permit; and

PARTIE 2

LICENCES

SECTION 1

LICENCES D'EXPLOITATION OCCASIONNELLE DE CARRIÈRE

Demandes

11 Les demandes de licence d'exploitation occasionnelle de carrière se font par écrit au registraire, à l'aide de la formule qu'il fournit, et sont accompagnées de ce qui suit :

a) les droits réglementaires prévus à l'annexe A;

b) la description légale de la zone visée par la demande, si elle est située en territoire arpenté;

c) un plan ou une carte indiquant l'emplacement de la zone visée par la demande, si elle est située en territoire non arpenté;

d) une description de la nature et de l'emplacement des caractéristiques importantes de la zone visée par la demande, y compris les constructions, les routes, les pistes et les autres améliorations.

Licences d'exploitation occasionnelle de carrière

12(1) Les licences d'exploitation occasionnelle de carrière autorisent leur titulaire à extraire, pendant la période qu'elles visent, la quantité de minéraux de carrière qui y est précisée.

12(2) Les titulaires d'une licence d'exploitation occasionnelle de carrière :

a) se conforment aux modalités et aux conditions énoncées dans leur licence;

b) tiennent un registre quotidien exact de la quantité de minéraux de carrière extraite de la zone visée par leur licence;

c) au plus tard le 30e jour qui suit l'expiration, la cession ou l'annulation de leur licence, remettent au registraire, au moyen de la formule qu'il leur fournit, un relevé exact de la quantité totale de minéraux de carrière extraite de la zone visée par leur licence;

(d) at the time the statement required under clause (c) is provided, pay the royalty for the quarry mineral and the rehabilitation levy in accordance with Schedule C.

d) au moment de la production du relevé visé à l'alinéa c), paient les redevances exigibles à l'égard des minéraux de carrière et les cotisations de remise en état prévues à l'annexe C.

DIVISION 2

QUARRY EXPLORATION PERMIT

SECTION 2

LICENCES D'EXPLORATION DE CARRIÈRE

Application

13 An application for a quarry exploration permit shall be made to the recorder in writing, on a form furnished by the recorder, and shall be accompanied by

(a) the application fee and cash deposit prescribed therefor in Schedule A;

(b) the legal land description of the area applied for where the area is in surveyed territory;

(c) the geographic coordinates of the corners, together with a plan or map showing the location of the area applied for, where the area is in unsurveyed territory;

(d) a description of the nature and location of any prominent feature in the area applied for, including any structures, roads, trails and other improvements; and

(e) a description of the proposed exploration activity, including the nature and extent of any disturbance to the environment that will result from the proposed activity together with a detailed plan of rehabilitation for any such disturbance.

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Demandes

13 Les demandes de licence d'exploration de carrière se font par écrit au registraire, à l'aide de la formule qu'il fournit, et sont accompagnées de ce qui suit :

a) les droits et le dépôt réglementaires prévus à l'annexe A;

b) la description légale de la zone visée par la demande, si elle est située en territoire arpenté;

c) les coordonnées géographiques des coins ainsi qu'un plan ou une carte indiquant l'emplacement de la zone visée par la demande, si elle est située en territoire non arpenté;

d) une description de la nature et de l'emplacement des caractéristiques importantes de la zone visée par la demande, y compris les constructions, les routes, les pistes et les autres améliorations;

e) une description des activités d'exploration projetées, y compris la nature et l'étendue des perturbations environnementales devant découler de ces activités, ainsi qu'un plan détaillé de la remise en état des lieux.

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Quarry exploration permit

14(1) A quarry exploration permit grants the holder the exclusive right to explore for the quarry mineral specified in the permit and contained within the boundaries of the permit area projected vertically downward.

14(2) Unless otherwise approved by the director, the area covered by a quarry exploration permit shall be approximately rectangular and its length shall not exceed four times its width.

Licences d'exploration de carrière

14(1) Les licences d'exploration de carrière accordent à leur titulaire le droit exclusif d'explorer pour trouver les minéraux de carrière qu'elles visent et qui se trouvent en deçà des limites qui y sont précisées, abaissées verticalement vers le bas.

14(2) Sauf autorisation contraire du directeur, les zones visées par les licences d'exploration de carrière sont à peu près de forme rectangulaire et leur longueur ne dépasse pas quatre fois leur largeur.

14(3) The term of a quarry exploration permit shall be three years, subject to performance of required work in accordance with Schedule B.

Report of Work

15 No later than the 30th day following each anniversary date of the issue of a quarry exploration permit, the holder shall provide the recorder with a written report of all work performed on the permit during the preceding year in accordance with Schedule B, together with a statement of the expenditures incurred in performing the work.

Work deficiency

16(1) Where the approved expenditures for work carried out under a quarry exploration permit are less than those prescribed in Schedule A, the holder shall make up the deficiency by making a cash payment to the recorder in a sum equal to the amount of the deficiency.

16(2) Where under subsection (1) the holder of a quarry exploration permit makes a cash payment to make up a work deficiency in any year, and in a subsequent year performs work equivalent in value to the deficiency or a portion thereof, in addition to the normal work required under Schedule A in respect of that subsequent year, and submits proof of that additional work to the recorder, the cash payment or such portion thereof as may be equal to the value of the additional work, as the case may be, shall be refunded to the holder, and where a portion only of the cash payment is so refunded the remaining balance of the payment becomes the property of the Crown.

Excess work

17 Where work performed in respect of a quarry exploration permit in any year is in excess of required work applicable in respect of the permit, the excess work may be applied in reduction or satisfaction of the required work in any succeeding year of the quarry exploration permit.

Surrender or conversion

18 Subject to compliance with section 15 and if the expenditure on required work as set out in Schedule A has been carried out or payment in accordance with subsection l6(1) has been made, the holder of a quarry exploration permit may apply to the director in writing

(a) to reduce the area of the permit;

14(3) Les licences d'exploration de carrière sont valides pour 3 ans, sous réserve de l'exécution des travaux obligatoires prévus à l'annexe B.

Rapport des travaux

15 Les titulaires d'une licence d'exploration de carrière fournissent par écrit au registraire, au plus tard le 30e jour qui suit chaque anniversaire d'établissement de leur licence, un rapport de tous les travaux exécutés au cours de l'année précédente conformément à l'annexe B ainsi qu'un état des dépenses engagées pour l'exécution de ces travaux.

Insuffisance des travaux

16(1) Lorsque les dépenses approuvées pour des travaux exécutés aux termes d'une licence d'exploration de carrière sont inférieures à celles prévues à l'annexe A, le titulaire verse la différence en espèces au registraire.

16(2) L'équivalent de la valeur des travaux excédentaires est remboursé aux titulaires de licence d'exploration de carrière qui ont, en application du paragraphe (1), fait un versement en espèces pour compenser l'insuffisance des travaux exécutés au cours d'une année, qui exécutent pendant une année postérieure des travaux en sus des travaux obligatoires ordinaires prévus à l'annexe A et qui en fournissent la preuve au registraire. Lorsqu'une partie seulement du versement en espèces est remboursée, le solde devient la propriété de la Couronne.

Travaux excédentaires

17 Les travaux exécutés au cours d'une année en sus des travaux obligatoires prévus aux termes d'une licence d'exploration de carrière peuvent être comptés comme travaux obligatoires d'une année d'application postérieure de la licence.

Cession ou transformation

18 Les titulaires d'une licence d'exploration de carrière qui se sont conformés à l'article 15 et qui ont engagé les dépenses pour travaux obligatoires prévues à l'annexe A ou qui ont fait le versement visé au paragraphe 16(1) peuvent, par écrit, demander au directeur de :

a) réduire la zone visée par leur licence;

(b) to convert the permit to a quarry lease; or

(c) to surrender the permit.

Lapse
19(l) Subject to subsection l6(1), if the report of work and statement of expenditures are not submitted by the holder of a quarry exploration permit in accordance with section 15, the permit shall lapse and that portion of the cash deposit and payment equivalent to the deficiency shall be forfeited to the Crown.

19(2) Where the cash deposit and payment with respect to a quarry exploration permit is less than the required work, the holder of the permit shall pay the deficiency.

Return of cash deposit
20 The cash deposit required under clause 13(a) with respect to a quarry exploration permit, or a portion thereof, shall be returned to the holder

(a) where the director refuses to issue the quarry exploration permit;

(b) at the end of the term of the quarry exploration permit, where the holder is in compliance with sections 14, 15 and 16; or

(c) upon surrender or conversion of the quarry exploration permit pursuant to section 18;

as the case may be.

Conversion prior to production
21 Prior to the commencement of production from the area of a quarry exploration permit, the holder shall make application to convert the quarry exploration permit to a quarry lease.

b) transformer leur licence en bail d'exploitation de carrière;

c) céder leur licence.

Déchéance
19(1) Sous réserve du paragraphe 16(1), les licences d'exploration de carrière des titulaires qui ne produisent pas le rapport des travaux et le relevé des dépenses conformément à l'article 15 tombent en déchéance et la partie du dépôt et du versement correspondant à l'insuffisance est dévolue à la Couronne.

19(2) Lorsque le dépôt et le versement faits aux termes d'une licence d'exploration de carrière sont inférieurs à la valeur des travaux obligatoires, le titulaire de la licence paie la différence.

Remboursement du dépôt
20 Le dépôt prévu à l'alinéa 13a) à l'égard des licences d'exploration de carrière est remboursé, en tout ou partie, dans les cas suivants:

a) le directeur refuse de délivrer la licence d'exploration de carrière;

b) à l'expiration de la licence d'exploration de carrière, le titulaire remplit toutes les conditions des articles 14, 15 et 16;

c) à la cession ou à la transformation de la licence d'exploration de carrière conformément à l'article 18.

Transformation avant le début de la production
21 Les titulaires d'une licence d'exploration de carrière doivent demander la transformation de leur licence en bail d'exploitation de carrière avant le début de la production dans la zone visée par leur licence.

PART 3

QUARRY LEASE

Applications

22 An application for a quarry lease shall be made to the recorder in writing, on a form furnished by the recorder, and shall be accompanied by

(a) an application fee and the annual rent for the first year of the lease prescribed therefor in Schedule A;

(b) the legal land description of the area applied for, where the area is in surveyed territory;

(c) the geographic coordinates of the corners of the area applied for together with a plan or map showing the location of the area, where the area is in unsurveyed territory; and

(d) a description of the nature and location of any prominent features in the area applied for, including any structures, roads, trails and other improvements.

M.R. 179/2002

Additional requirements

23 Where the applicant for a quarry lease or the renewal of a quarry lease is a corporation, or a corporation has an interest in a quarry lease in respect of which an application is made, the applicant shall submit to the minister, in addition to the requirements of section 22,

(a) proof that the corporation is incorporated or registered under the laws of Manitoba to transact business in Manitoba;

(b) the names, places of residence, post office addresses and callings of the president, secretary, treasurer and directors of the corporation;

(c) the location and postal address of the head office or registered office of the corporation;

(d) the location and postal address of the principal office of the corporation in Manitoba if the head office or registered office is situated outside Manitoba;

PARTIE 3

BAUX D'EXPLOITATION DE CARRIÈRE

Demandes

22 Les demandes de bail d'exploitation de carrière se font par écrit au registraire, à l'aide de la formule qu'il fournit, et sont accompagnées de ce qui suit :

a) les droits et le loyer de la première année du bail réglementaires prévus à l'annexe A;

b) la description légale de la zone visée par la demande, si elle est située en territoire arpenté;

c) les coordonnées géographiques des coins de la zone visée par la demande ainsi qu'un plan ou une carte en indiquant l'emplacement, si elle est située en territoire non arpenté;

d) une description de la nature et de l'emplacement des caractéristiques importantes de la zone visée par la demande, y compris les constructions, les routes, les pistes et les autres améliorations.

R.M. 179/2002

Exigences supplémentaires

23 La corporation qui demande un bail d'exploitation de carrière ou le renouvellement d'un tel bail ou la personne qui présente une demande à l'égard d'un bail d'exploitation de carrière dans lequel une corporation a un intérêt doit, en plus des exigences prévues à l'article 22, fournir au ministre ce qui suit :

a) une preuve que la corporation est constituée ou enregistrée sous le régime des lois du Manitoba pour faire des affaires au Manitoba;

b) les noms, les lieux de résidence, les adresses postales et les titres du président, du secrétaire, du trésorier et des administrateurs de la corporation;

c) le nom de l'endroit et l'adresse postale du siège social ou du siège officiel de la corporation;

d) le nom de l'endroit et l'adresse postale du bureau principal de la corporation au Manitoba, si le siège social ou le siège officiel est situé ailleurs;

(e) the name, place of residence and post office address of the agent or manager in Manitoba who is authorized to represent the corporation and to accept service in all suits and proceedings against the corporation; and

(f) such additional information as the minister may, under the Act, require.

Refusal to issue quarry lease

23.1(1) If the minister refuses to issue a quarry lease, the applicant shall be notified in writing of the refusal and the reasons for the refusal.

M.R. 179/2002

23.1(2) If the minister has refused to issue a quarry lease, the minister shall refund to the applicant the rent paid in advance but not any application fee paid by the applicant.

M.R. 179/2002

Area

24 The area of a quarry lease

(a) shall be approximately rectangular in shape and its length shall not exceed four times its width, unless otherwise approved by the minister under the Act;

(b) for all quarry minerals excepting peat, shall not exceed 70 hectares more or less; and

(c) for peat, shall not exceed 270 hectares more or less.

Statement of quantities and payments

25 The holder of a quarry lease shall provide the recorder with an annual statement of the total quantity of quarry mineral that has been produced from the lease area, accompanied by a royalty payment and a rehabilitation levy payment in accordance with Schedule C and the annual rent prescribed therefor in Schedule A, no later than the 30th day following the anniversary date of the lease.

Rent

26 The annual rental for an area under quarry lease shall be payable in advance.

e) le nom, le lieu de résidence et l'adresse postale du représentant ou du directeur autorisé à représenter la corporation au Manitoba et à accepter les significations dans toutes les poursuites et les instances introduites contre elle;

f) tous les autres renseignements que le ministre peut exiger en application de la *Loi*.

Refus de délivrance

23.1(1) S'il refuse de délivrer un bail d'exploitation de carrière, le ministre fait parvenir au demandeur un avis motivé en ce sens.

R.M. 179/2002

23.1(2) S'il refuse de délivrer un bail d'exploitation de carrière, le ministre rembourse au demandeur les loyers versés par anticipation, mais ne rembourse pas les droits de demande.

R.M. 179/2002

Zones

24 Les zones visées par les baux d'exploitation de carrière :

a) sont à peu près de forme rectangulaire et leur longueur ne dépasse pas quatre fois leur largeur, à moins d'autorisation contraire du ministre aux termes de la *Loi*;

b) ne dépassent pas plus ou moins 70 hectares pour ce qui est de tous les minéraux de carrière, à l'exception de la tourbe;

c) ne dépassent pas plus ou moins 270 hectares pour ce qui est de la tourbe.

Relevé des quantités et des versements

25 Les titulaires d'un bail d'exploitation de carrière remettent au registraire, au plus tard dans les 30 jours qui suivent l'anniversaire de leur bail, un relevé annuel faisant état de la quantité totale de minéraux de carrière extraite de la zone visée par leur bail, le versement des redevances et des cotisations de remise en état prévues à l'annexe C ainsi que le loyer annuel prévu à l'annexe A.

Loyer

26 Le loyer annuel de la zones visée par un bail d'exploitation de carrière est payable d'avance.

Lease form
27 Any quarry lease issued shall be in the form prescribed in Schedule D and shall be issued in duplicate.

Subsequent application
28(1) The holder of a quarry lease who has complied with all conditions thereof may apply to the minister in writing for permission

(a) to reduce or enlarge the area under lease;

(b) to convert all or part of the lease to a quarry exploration permit or a casual quarry permit;

(c) to surrender the quarry lease;

(d) to subdivide the lease into two or more leases; or

(e) to amalgamate two or more quarry leases.

M.R. 250/96

28(2) Where an application to reduce or enlarge the area of a quarry lease is made under subsection (1) and the reduction or enlargement is approved by the minister, the original quarry lease document shall be amended to reflect the change in area, but the anniversary date and term of the quarry lease shall remain the same as for the original quarry lease.

M.R. 250/96

28(3) Where an application for the subdivision of a quarry lease is made and the subdivision is approved by the minister, new quarry lease documents shall be issued for each new quarry lease, but the anniversary date and term of each new lease shall remain the same as for the original lease.

M.R. 250/96

28(4) Where an application for the amalgamation of two or more quarry leases is made and the amalgamation is approved by the minister, a new quarry lease shall be issued for a new term starting on the day the minister receives the application.

M.R. 250/96

Formule du bail
27 Tous les baux d'exploitation de carrière sont établis en double exemplaire, selon la formule prévue à l'annexe D.

Demandes ultérieures
28(1) Les titulaires d'un bail d'exploitation de carrière qui se sont conformés à toutes les conditions de leur bail peuvent, par écrit, demander au ministre la permission de :

a) réduire ou d'agrandir la zone visée par leur bail;

b) transformer en tout ou partie leur bail en une licence d'exploration de carrière ou en licence d'exploitation occasionnelle de carrière;

c) céder leur bail d'exploitation de carrière;

d) subdiviser leur bail en deux baux ou plus;

e) amalgamer des baux d'exploitation de carrière.

R.M. 250/96

28(2) Lorsque le ministre approuve une demande de réduction ou d'agrandissement de la zone visée par un bail d'exploitation de carrière présentée en application du paragraphe (1), le bail d'exploitation de carrière original est modifié de sorte à refléter le changement de la zone. Toutefois, la date anniversaire et l'échéance du bail ne changent pas.

R.M. 250/96

28(3) Lorsque le ministre approuve une demande de subdivision d'un bail d'exploitation de carrière, de nouveaux documents sont établis pour chaque nouveau bail d'exploitation de carrière, mais la date anniversaire et les conditions des nouveaux baux demeurent les mêmes que celles du bail original.

R.M. 250/96

28(4) Si le ministre approuve une demande d'amalgamation de baux d'exploitation de carrière, le nouveau bail d'exploitation de carrière commence à la date à laquelle le ministre reçoit la demande.

R.M. 250/96

Renewal of quarry lease

29 The holder of a quarry lease who has complied with the Act and the terms and conditions of the lease may apply to the recorder for a renewal of the quarry lease prior to the expiry of the term of the lease, and the application shall be accompanied by the application fee and annual rent for the first year of the renewal as prescribed in Schedule A.

Renouvellement des baux d'exploitation de carrière

29 Les titulaires d'un bail d'exploitation de carrière qui se sont conformés aux dispositions de la *Loi* et aux conditions de leur bail peuvent demander au registraire de le renouveler avant qu'il n'arrive à échéance. Leur demande doit être accompagnée des droits correspondants et du loyer de la première année de renouvellement prévus à l'annexe A.

PART 4

SURFACE LEASE

PARTIE 4

BAUX DE SURFACE

Application

30 An application for a surface lease shall be made in writing to the director and shall be accompanied by

Demandes

30 Les demandes de bail de surface se font par écrit au directeur et sont accompagnées de ce qui suit :

Continues on page 13.

Suite à la page 13.

(a) the application fee and rent for the first year as prescribed in Schedule A;

(b) the legal land description of the area applied for, where the area is in surveyed territory;

(c) the geographic coordinates of the four corners of the surface lease area, together with a plan or map showing the location of the area applied for, where the area is in unsurveyed territory; and

(d) a description of the nature and location of any prominent features in the area applied for, including any structures, roads, trails and other improvements.

M.R. 250/96

31 Repealed.

M.R. 201/2011

a) les droits et le loyer de la première année prévus à l'annexe A;

b) la description légale de la zone visée par la demande, si elle est située en territoire arpenté;

c) les coordonnées géographiques des quatre coins de la zone visée par la demande ainsi qu'un plan ou une carte en indiquant l'emplacement, si elle est située en territoire non arpenté;

d) une description de la nature et de l'emplacement des caractéristiques importantes de la zone visée par la demande, y compris les constructions, les routes, les pistes et les autres améliorations.

R.M. 250/96

31 Abrogé.

R.M. 201/2011

PART 5

OPERATION AND REHABILITATION OF QUARRIES

DIVISION 1

DEFINITIONS AND APPLICATION

Definitions

32 In this Part,

"**adjacent property**" means property adjacent to a parcel of land upon which a pit or quarry is established or operated; (« propriété adjacente »)

"**associated product**" means petroleum or any derivative thereof, except gasoline, that is in a liquid state at ambient temperature and pressure; (« produit connexe »)

PARTIE 5

EXPLOITATION ET REMISE EN ÉTAT DES CARRIÈRES

SECTION 1

DÉFINITIONS ET CHAMP D'APPLICATION

Définitions

32 Les définitions qui suivent s'appliquent à la présente partie.

« **essence** » Produit liquide du pétrole ayant un point d'éclair inférieur à 37,8 degrés Celsius et devant servir principalement dans les moteurs à combustion interne. ("gasoline")

« **limite de la propriété** » Limite d'une parcelle de bien-fonds. ("property line")

"**gasoline**" means a liquid product of petroleum that has a flash point below 37.8 degrees Celsius and is designed primarily for use in an internal combustion engine; (« essence »)

"**linear peak sound pressure level**" means the maximum absolute sound pressure as measured using a sound level monitoring device which equals or surpasses the requirement of International Electrotechnical Commission (I.E.C.) Publications 179 (1973) 'precision sound level meters' and 179A (1973) 'Additional characteristics for the measurement of impulsive sounds', including section 4.5.1, using linear weighting network and peak hold meter responses, or the equivalent; (« niveau maximum linéaire de pression acoustique »)

"**parcel of land**" means the aggregate of all land described in any manner in a certificate of title or deed; (« parcelle de bien-fonds »)

"**peak particle velocity**" means the maximum instantaneous velocity experienced by the particles of a medium when set into transient vibratory motion, and is the greatest velocity of any of the three mutually perpendicular directions which are vertical, radial and transverse to the source; (« vitesse maximale d'une particule »)

"**property line**" means the property line of a parcel of land; (« limite de la propriété »)

"**residence**" includes a seasonal residence; (« résidence »)

"**seasonal residence**" means a residential dwelling unit that is regularly occupied on a seasonal basis, and includes a lodge; (« résidence saisonnière »)

"**shore**" means the area of land measured five metres horizontally from the high water mark of a permanent or seasonal body of water. (« rive »)

33 Repealed.

M.R. 250/96

« **niveau maximum linéaire de pression acoustique** » Pression acoustique maximale absolue mesurée à l'aide d'un sonomètre d'une précision égale ou supérieure à l'exigence précisée dans la publication 179 (1973) intitulée « Sonomètres de précision » ou dans la publication 179A (1973) intitulée « Additional characteristics for the measurement of impulsive sounds » de la Commission électronique internationale (CEI), y compris l'article 4.5.1, à l'aide d'un réseau de pondération linéaire et d'un indicateur de crête ou l'équivalent. ("linear peak sound pressure level")

« **parcelle de bien-fonds** » Ensemble de tous les biens-fonds décrits de quelque façon que ce soit dans un certificat de titre ou un titre de propriété. ("parcel of land")

« **produit connexe** » Pétrole et ses dérivés, à l'exception de l'essence, se trouvant à l'état liquide à température et pression ambiantes. ("associated product")

« **propriété adjacente** » Terrain contigu à une parcelle de bien-fonds sur laquelle se trouve ou est exploitée une carrière. ("adjacent property")

« **résidence** » Sont assimilées aux résidences les résidences saisonnières. ("residence")

« **résidence saisonnière** » Unité d'habitation résidentielle occupée habituellement en fonction de la saison. Y sont assimilés les pavillons. ("seasonal residence")

« **rive** » Bande de terre de cinq mètres de largeur mesurée horizontalement à partir de la laisse de crue d'une nappe d'eau permanente ou saisonnière. ("shore")

« **vitesse maximale d'une particule** » Vitesse maximale instantanée des particules d'un médium mis en vibration transitoire et correspondant à la vitesse la plus élevée des trois directions normales, à savoir verticale, radiale et transversale par rapport à la source. ("peak particle velocity")

33 Abrogé.

R.M. 250/96

DIVISION 2

REGISTRATION OF AGGREGATE QUARRIES

Application of Division 2

34 This Division does not apply to a person engaged in farming who establishes or operates an aggregate quarry on the farm solely for purposes incidental to the farming operation, where none of the quarry mineral from the aggregate quarry so operated is exposed or offered for sale, sold, donated or otherwise disposed of.

Application for registration certificate

35(1) An application for a registration certificate to establish or operate one or more aggregate quarries on a parcel of land shall be made by

(a) submitting to the recorder a completed application on a form furnished by the recorder; and

(b) paying the fee prescribed therefor in schedule A.

35(2) An interim authorization, granted by the director to an applicant who has orally provided the information required in an application made under subsection (1) to an official of the Mining Recording Office and who will be submitting the written application and fee by mail, is valid for the period of time stated in the authorization, but that period shall not exceed seven days.

Filing of Annual Return Statement

36 Within 30 days of the expiry of a registration certificate, the holder thereof shall

(a) submit a completed annual return in accordance with section 199 of the Act, on a form furnished by the recorder; and

(b) pay the rehabilitation levy prescribed therefor in Schedule C.

SECTION 2

ENREGISTREMENT DES CARRIÈRES D'AGREGATS

Application de la section 2

34 La présente section ne s'applique pas aux exploitants agricoles qui ouvrent ou exploitent une carrière d'agrégats dans leur ferme uniquement aux fins de leur exploitation agricole, à la condition qu'ils ne mettent pas en vente, ne vendent pas, ne donnent pas et ne disposent pas de quelque autre façon des minéraux de carrière extraits de leur carrière d'agrégats.

Demandes de certificat d'enregistrement

35(1) Les demandes de certificat d'enregistrement en vue de l'ouverture ou de l'exploitation d'une ou de plusieurs carrières d'agrégats sur une parcelle de bien-fonds se font :

a) en remettant au registraire la formule de demande dûment remplie qu'il fournit;

b) en payant les droits réglementaires prévus à l'annexe A.

35(2) Les autorisations provisoires que le directeur accorde aux demandeurs qui ont fourni verbalement les renseignements exigés dans la demande prévue au paragraphe (1) à un agent du bureau du registre minier et qui doivent faire parvenir la demande écrite et les droits correspondants par la poste sont valides pour la période qui y est précisée. Toutefois, cette période ne saurait dépasser 7 jours.

Dépôt des rapports annuels

36 Dans les 30 jours qui suivent l'expiration de leur certificat d'enregistrement, les titulaires :

a) remettent un rapport annuel rempli conformément à l'article 199 de la *Loi*, sur la formule que leur fournit le registraire;

b) paient les cotisations de remise en état prévues à l'annexe C.

DIVISION 3

OPERATION OF QUARRIES

Clearing site

37 Prior to stripping topsoil and overburden in preparation for the excavation of a quarry, an operator shall

(a) clear the slash and timber over the proposed excavation;

(b) where the slash and timber is not disposed of immediately, pile it at least four metres from the nearest standing timber; and

(c) dispose of the slash and timber by burial, burning or removal, or as prescribed in a permit issued under *The Forestry Act* or *The Crown Lands Act*.

Stockpiling soil and overburden

38(1) Every operator of a quarry shall stockpile on the parcel of land or within the area of the quarry mineral disposition, all topsoil and overburden stripped in the process of excavating the quarry.

38(2) The operator of a quarry may apply to the director in writing for an exemption from the requirement of subsection (1) where the overburden and topsoil are surplus to the amount required for rehabilitation of the property.

Setback for stockpiles

39 No operator of a quarry shall stockpile any slash, timber, topsoil or overburden from the excavation of a quarry closer than eight metres to the nearest property line, unless the operator first

(a) obtains the written consent of the owner of the adjacent property; and

(b) provides a copy of the written consent to the director.

SECTION 3

EXPLOITATION DES CARRIÈRES

Nettoyage des emplacements

37 Avant d'enlever la terre végétale et les morts-terrains en vue de l'excavation d'une carrière, les exploitants :

a) enlèvent les débris de bois et les arbres qui se trouvent à l'emplacement de l'excavation proposée;

b) empilent les débris de bois et les arbres dont ils ne se départissent pas immédiatement à au moins quatre mètres du peuplement forestier sur pied le plus près;

c) se départissent des débris de bois et des arbres en les enterrant, en les brûlant ou en les enlevant ou de la manière prévue dans la licence délivrée en application de la *Loi sur les forêts* ou de la *Loi sur les terres domaniales*.

Empilage de la terre et des morts-terrains

38(1) Les exploitants d'une carrière empilent sur la parcelle de bien-fonds ou dans le périmètre d'exploitation de l'aliénation de minéraux de carrière la terre végétale et les morts-terrains enlevés au cours de l'excavation de la carrière.

38(2) Les exploitants d'une carrière peuvent demander par écrit au directeur de les soustraire aux exigences prévues au paragraphe (1) lorsqu'il y a plus de morts-terrains et de terre végétale qu'il n'en faut pour la remise en état des lieux.

Marges d'isolement

39 Il est interdit aux exploitants d'une carrière d'empiler des débris de bois, du bois, de la terre végétale ou des morts-terrains enlevés au cours de l'excavation d'une carrière en deçà de huit mètres de la limite de la propriété la plus près, à moins de n'avoir d'abord :

a) obtenu le consentement écrit du propriétaire de la propriété adjacente;

b) remis une copie du consentement écrit au directeur.

(b) the growth of various weeds; or

c) both erosion as described in clause (a) and the growth of weeds as described in clause (b);

the operator of the quarry shall establish an interim vegetation cover or undertake such alternative remedial measures as are necessary to eliminate the problem.

Waste water drainage

42(1) Subject to subsection (2), no operator of a quarry shall permit water pumped from the quarry or used in treating or processing quarry minerals

(a) to run directly onto adjacent property, unless the operator is the holder of a subsisting licence under *The Water Rights Act*; or

(b) to drain directly into an underlying aquifer where it may reasonably be expected to contaminate a potable water supply.

42(2) Clause (1)(a) does not apply to an operator who

(a) has first obtained the written consent of the owner of the adjacent property and of the mineral rights in the adjacent property; and

(b) provides a copy of the written consent to the director.

Setbacks

43(1) Subject to subsections (2), (3) and (4), an operator of a quarry shall not excavate closer than the following distances from any property line, residence or shore of a river, lake or stream:

(a) where the operator is mining an unconsolidated quarry mineral,

(i) 4 metres from any property line, and

(ii) 150 metres from any residence located beyond the property line;

b) la croissance de mauvaises herbes diverses;

c) à la fois les problèmes prévus aux alinéas a) et b) ci-dessus.

R.M. 179/2002

Drainage des eaux résiduaires

42(1) Sous réserve du paragraphe (2), il est interdit aux exploitants d'une carrière de laisser l'eau retirée de la carrière ou utilisée pour le traitement ou la préparation des minéraux de carrière :

a) s'écouler directement sur la propriété adjacente, à moins qu'ils ne soient titulaires d'une licence valide délivrée en application de la *Loi sur les droits d'utilisation de l'eau*;

b) s'écouler directement dans une formation aquifère sous-jacente où il est raisonnable de croire qu'elle pourrait contaminer une source d'approvisionnement en eau potable.

42(2) L'alinéa (1)a) ne s'applique pas aux exploitants qui :

a) ont d'abord obtenu le consentement écrit du propriétaire de la propriété adjacente et des droits miniers dans la propriété adjacente;

b) remettent une copie du consentement écrit au directeur.

Marges d'isolement

43(1) Sous réserve des paragraphes (2), (3) et (4), il est interdit aux exploitants d'une carrière de creuser à moins des distances précisées ci-après des limites des propriétés, des résidences ou des rives des rivières, des lacs ou des cours d'eau, dans les cas suivants :

a) l'extraction des minéraux de carrière non consolidés a lieu :

(i) à 4 mètres de la limite de la propriété,

(ii) à 150 mètres de la résidence située derrière la limite de la propriété;

(b) where the operator is mining a consolidated quarry mineral from a quarry developed after the date of the coming into force of this regulation,

(i) 15 metres from any property line, and

(ii) 400 metres from any residence;

(c) where the operator is mining a consolidated quarry mineral from a quarry existing before the date of the coming into force of this regulation

(i) 15 metres from any property line, and

(ii) 250 metres from any residence; and

(d) in the case of any type of quarry, 50 metres from the shore of any river, lake or stream.

43(2) Notwithstanding sub-clause (1)(a)(i), an operator of a quarry mining an unconsolidated quarry mineral shall not mine closer to any property line than the horizontal distance equal to the sum obtained when 4 metres is added to the product of three times the depth of the excavation, where that sum exceeds the distance specified in that sub-clause.

43(3) The setback restrictions prescribed in sub-clauses (1)(a)(ii) and (1)(b)(ii) do not apply

(a) between an existing quarry and any residence constructed on an adjacent parcel after the date of the coming into force of this regulation; or

(b) where the quarry will be mined for a period of time not exceeding four months during the course of three calendar years.

43(4) Subsections (1) and (2) do not apply to the operator of a quarry who

(a) has first obtained the written consent of the owner of any adjacent property and of the mineral rights in the adjacent property; and

(b) provides a copy of the written consent to the director.

b) l'extraction des minéraux consolidés d'une carrière qui a été ouverte après la date d'entrée en vigueur du présent règlement a lieu :

(i) à 15 mètres de la limite de la propriété,

(ii) à 400 mètres de la résidence;

c) l'extraction des minéraux consolidés d'une carrière qui a été ouverte avant la date d'entrée en vigueur du présent règlement à lieu :

(i) à 15 mètres de la limite de la propriété,

(ii) à 250 mètres de la résidence;

d) pour ce qui est de tous les types de carrière, à 50 mètres de la rive d'une rivière, d'un lac ou d'un cours d'eau.

43(2) Par dérogation au sous-alinéa (1)a)(i), il est interdit aux exploitants d'une carrière d'extraire des minéraux de carrière non consolidés à moins de la distance horizontale correspondant au produit obtenu en multipliant par trois la profondeur de l'excavation et en y ajoutant 4 mètres, si la somme est supérieure à la distance précisée au sous-alinéa en question.

43(3) Les marges d'isolement prévues aux sous-alinéas (1)a)(ii) et (1)b)(ii) ne s'appliquent pas dans les cas suivants :

a) la résidence est construite après la date d'entrée en vigueur du présent règlement sur une parcelle adjacente à une carrière qui existe déjà;

b) la carrière est exploitée pendant tout au plus quatre mois sur une période de trois années civiles.

43(4) Les paragraphes (1) et (2) ne s'appliquent pas aux exploitants d'une carrière qui :

a) ont d'abord obtenu le consentement écrit du propriétaire de la propriété adjacente et des droits miniers dans la propriété adjacente;

b) remettent une copie du consentement écrit au directeur.

Blasting

44(1) No operator of a quarry shall permit any blasting at the quarry

(a) between 4:00 p.m. of any day and 9:00 a.m. of the following day; or

(b) at any time on a Saturday, Sunday or statutory holiday;

unless otherwise approved by the director under the Act.

44(2) No operator of a quarry shall permit any blasting at the quarry that emits sound exceeding the following limits when measured on adjacent property:

(a) within 15 metres of a building maintained as a residence, 130 decibels linear peak sound pressure level;

(b) within 15 metres of a building maintained for use other than as a residence, 150 decibels linear peak sound pressure level; and

(c) where any person other than an employee of the operator is exposed to the sound, 140 decibels linear peak sound pressure level.

44(3) No operator of a quarry shall permit any blasting at the quarry that emits soil-borne vibrations exceeding the following limits when measured on adjacent property inside a building below grade or less than one metre above grade,

(a) for any building maintained as a residence, 12 millimetres per second peak particle velocity; and

(b) for any building maintained for use other than as a residence, 50 millimetres per second peak particle velocity.

Dynamitage

44(1) À moins d'autorisation contraire du directeur aux termes de la *Loi*, il est interdit aux exploitants d'une carrière de permettre le dynamitage à leur carrière :

a) entre 16 heures et 9 heures;

b) les samedis, les dimanches et les jours fériés.

44(2) Il est interdit aux exploitants d'une carrière de permettre le dynamitage à leur carrière lorsque les émissions de bruits, mesurées sur la propriété adjacente, dépassent les limites suivantes

a) à moins de 15 mètres d'un bâtiment servant de résidence, le niveau maximum linéaire de pression acoustique de 130 décibels;

b) à moins de 15 mètres d'un bâtiment ne servant pas de résidence, le niveau maximum linéaire de pression acoustique de 150 décibels;

c) lorsqu'une personne autre qu'un employé de l'exploitant de la carrière est soumise au bruit, le niveau maximum linéaire de pression acoustique de 140 décibels.

44(3) Il est interdit aux exploitants d'une carrière de permettre du dynamitage à leur carrière qui provoque la transmission de vibrations par le sol qui dépassent, lorsque mesurées sous le niveau moyen du sol ou moins de 1 mètre au-dessus du niveau moyen du sol à l'intérieur d'un bâtiment se trouvant sur la propriété adjacente, les limites suivantes :

a) dans le cas des bâtiments servant de résidence, la vitesse maximale d'une particule de 12 millimètres à la seconde;

b) dans le cas des bâtiments ne servant pas de résidence, la vitesse maximale d'une particule de 50 millimètres à la seconde.

Log book of blasting

45(1) An operator of a quarry shall ensure that a log book is maintained for the purpose of recording the following information with respect to blasting on the parcel of land on which the quarry is operated:

(a) a sketch of the blast area showing the location, depth, weight and composition of charges and the type of arrangement and delay timing of each detonator used;

(b) the time of each firing;

(c) details of the time of and reason for any malfunction or misfiring; and

(d) corrective action taken as a result of each malfunction or misfiring.

45(2) An operator of a quarry shall keep the log book maintained under subsection (1) on site and shall make it available for inspection at all reasonable times by

(a) any person authorized by the municipality or local government district in which the blasting takes place; and

(b) any employee of the Mines Branch of the Department of Industry, Trade and Mines, the Environmental Stewardship Division of the Department of Conservation or the Mines Inspections Branch of the Department of Labour and Immigration.

M.R. 179/2002

Noise nuisances other than blasting

46 No operator of a quarry shall permit a quarry to be established or operated that emits sound, other than sound caused by blasting, in excess of the following limits when measured at any adjacent seasonal or permanent residence:

(a) 45 dba sound pressure level, during the hours between 10:00 p.m. and 7:00 a.m.; and

(b) 55 dba sound pressure level during the hours between 7:00 a.m. and 10:00 p.m.

Registres de contrôle du dynamitage

45(1) Les exploitants d'une carrière veillent à ce que soit tenu un registre de contrôle et à ce que les renseignements suivants sur le dynamitage dans la parcelle de bien-fonds où se trouve leur carrière y soient consignés :

a) un schéma de la zone de dynamitage indiquant l'emplacement, la profondeur, le poids et la composition des explosifs utilisés ainsi que les dispositions prises pour l'évacuation et la vitesse de détonation de chaque détonateur utilisé;

b) l'heure de chaque déflagration;

c) l'heure et les raisons des déflagrations ratées;

d) les mesures correctives prises par suite de chaque déflagration ratée.

45(2) Les exploitants d'une carrière conservent le registre de contrôle visé au paragraphe (1) sur les lieux et font en sorte qu'il puisse être inspecté à toute heure raisonnable par :

a) toute personne autorisée par la municipalité ou le district d'administration locale où a lieu le dynamitage;

b) tout employé de la Direction des mines du ministère de l'Industrie, du Commerce et des Mines, de la Division de la gérance de l'environnement du ministère de la Conservation ou de la Direction de l'inspection des mines du ministère du Travail et de l'Immigration.

R.M. 179/2002

Nuisance acoustique autre que le dynamitage

46 Il est interdit aux exploitants d'une carrière de permettre l'ouverture ou l'exploitation d'une carrière dont les émissions de bruits, autres que les bruits causés par le dynamitage, dépassent, lorsque mesurées à une résidence adjacente permanente ou saisonnière, les limites suivantes :

a) le niveau de pression acoustique de 45 dBA, entre 22 heures et 7 heures;

b) le niveau de pression acoustique de 55 dBA, entre 7 heures et 22 heures.

Dust emissions
47 Every operator of a quarry shall limit the wind entrainment of the visible particulate matter to the extent that the particulate matter does not exhibit any opacity in excess of 5% at the property line.

Poussières
47 Les exploitants d'une carrière font en sorte que l'opacité des matières particulaires entraînées par le vent ne dépasse pas 5 % à la limite de la propriété.

Ground water protection
48 No operator of a quarry shall

(a) contaminate groundwater, or permit the contamination of groundwater, through the establishment or operation of an aggregate quarry; or

(b) establish or operate facilities for the permanent storage or handling of gasoline or associated products within the excavated portion of an aggregate quarry or in any place where the gasoline or associated product may leak into the excavated portion of an aggregate quarry.

Protection de l'eau souterraine
48 Il est interdit aux exploitants d'une carrière :

a) de contaminer ou de permettre la contamination de l'eau souterraine par l'ouverture ou l'exploitation d'une carrière d'agrégats;

b) d'établir ou d'exploiter des installations pour le stockage permanent ou la manutention de l'essence ou de produits connexes dans les limites de l'excavation d'une carrière d'agrégats ou à tout autre endroit d'où l'essence ou les produits connexes pourraient s'écouler dans l'excavation.

Open burning
49 No operator of a quarry shall permit open burning of garbage or debris on a parcel of land or lease during the operation of a quarry.

Brûlage à l'air libre
49 Il est interdit aux exploitants d'une carrière de permettre le brûlage à l'air libre de déchets ou de débris sur une parcelle de bien-fonds ou un bail pendant l'exploitation d'une carrière.

Alternative operational requirements
50 Where an operator of a quarry applies to the director for approval of a modification of operational requirements, as an alternative to those set out in sections 39 to 44, and 46, 47, 49, 50 and 51, and the director is satisfied that the modification will meet the intent of the Act and the regulations, the director may in writing give the approval and in that event the operational requirments as they apply to that operator are deemed to be modified accordingly.

Autres exigences d'exploitation
50 Le directeur peut approuver par écrit la modification que lui demande l'exploitant d'une carrière comme solution de rechange aux exigences d'exploitation énoncées aux articles 39 à 44, 46, 47, 49 50 et 51 s'il est convaincu que la modification respecte l'esprit de la *Loi* et des règlements. Les exigences d'exploitation qui s'appliquent à l'exploitant sont dès lors réputées modifiées en conséquence.

PART 6

REPEAL AND COMING INTO FORCE

Repeal

51 Manitoba Regulation 433/87R is repealed.

Coming into force

52 This regulation comes into force on April 1, 1992.

PARTIE 6

ABROGATION ET ENTRÉE EN VIGUEUR

Abrogation

51 Le *règlement du Manitoba* 433/87R est abrogé.

Entrée en vigueur

52 Le présent règlement entre en vigueur le 1er avril 1992.

SCHEDULES

QUARRY MINERALS REGULATION, 1992

A Fees, Rentals, Deposits and Expenditures

B Required Work and Reports of Required Work

C Royalty Rates and Rehabilitation Levy

D Quarry Lease

ANNEXES

RÈGLEMENT DE 1992 SUR LES MINÉRAUX DE CARRIÈRE

A Droits, loyers, dépôts et dépenses

B Travaux obligatoires et rapports des travaux

C Redevances et cotisations de remise en état

D Baux d'exploitation de carrière

SCHEDULE A

SCHEDULE OF FEES, RENTALS, DEPOSITS AND EXPENDITURES

FEES

1	Application for quarry lease and quarry exploration permit (first term and renewal) — per quarry mineral disposition	$67
2	Application for relief from forfeiture and extension of time — per quarry mineral disposition	$67
3	Application for casual quarry permit	$33
4	Application for surface lease	$67
5	Application for registration certificate — private aggregate quarry	$15
6	Application to Mining Board	$359
7	Copy of each recorded document or instrument	$7
8	Examination of each record in response to mail or telephone enquiry	$5
9	Filing report of work for quarry exploration permit — per year	$16
10	Registration of assignment, transfer or any other document or instrument — per quarry mineral disposition	$15
11	Computer generated reports based on client specified search criteria ordered through the office of the recorder per request	$20 (plus $0.50 for each page)
12	For the provision of any other service for which no fee is prescribed, per hour or part of an hour	$25

RENTALS

(Not refundable for any cause)

(1) Rental for a first term quarry lease and renewals for quarry minerals other than peat — $27 per hectare or fraction thereof per year.

(2) Rental for a first term quarry lease and renewals for peat — $6.50 per hectare or fraction thereof per year.

(3) Rental for surface lease — $7 per hectare or fraction thereof per year but not less than $144.

CASH DEPOSITS

The cash deposit required upon application for a Quarry Exploration Permit is $1,000 or $25 per hectare, whichever amount is greater.

EXPENDITURES

The expenditures on required work carried out on a Quarry Exploration Permit are as follows:

(1) $12 per hectare or part thereof for the first year.

(2) $24 per hectare or part thereof for the second year.

(3) $36 per hectare or part thereof for the third year.

M.R. 250/96; 8/2006; 201/2011; 59/2013

SCHEDULE B

REQUIRED WORK AND REPORTS OF REQUIRED WORK

Activities that constitute required work

1 The following activities constitute required work if the activities are carried out for the purpose of exploration and development of a quarry mineral disposition:

(a) prospecting;

(b) trenching or test pitting;

(c) land surveys;

(d) geological surveys;

(e) ground geophysical surveys;

(f) drilling for testing formations;

(g) laboratory testing;

(h) feasibility studies;

(i) any other activity approved by the director.

Content and format of required work report

2(1) A report of required work must

(a) be submitted

(i) in paper form, in which case the report must comply with the requirements of section 4 of this Schedule, or

(ii) electronically, in which case the report must comply with the requirements of section 5 of this Schedule; and

(b) have separate sections, on consecutively numbered pages, as set out in Column 1 of the following table, with each section having the content set out in Column 2:

Table	
Column 1 Section	**Column 2 Required content**
Title page	– the project name; – the location of the quarry mineral disposition; – the general nature of the report; – the name and address of the holder of the quarry mineral disposition; – the name of the author of the report; – the date or dates on which the required work was performed.
Table of contents	– in accordance with the consecutive page numbering used in the report, a listing of the main sections of the report, diagrams, drill logs or any other documentation, including numbered appendices, maps, figures and other illustrations.
Summary of required work being reported	– the general geographical location and access to the quarry mineral disposition; – a key map on a scale not larger than 1:20 000 and not smaller than 1:250 000 showing boundaries of the quarry mineral disposition with respect to easily identifiable topographical features; – the registration number of the quarry mineral disposition; – a description of the property, containing the current owner, operator, property and target commodity; – a summary of the required work performed as follows: (i) for geophysical survey, the total number of kilometres of line surveyed for each type of survey, (ii) for drilling, the number of holes being reported and the total metres of drilling, (iii) for geological survey, the scale of mapping and total area surveyed, (iv) for prospecting, the total area prospected.
Technical data and interpretation	– as determined by the investigation, the purpose, results, interpretation and conclusions, as required in this Schedule.
Author's qualifications	– the author's qualifications must be documented.
List of software used	– a list of the software programs and versions used in support of the required work and in the preparation of the report.
Additional information	– the additional information required under section 3 of this Schedule.

2(2) All text and map information in a report must be presented so that the location and the results of the work are clear and legible.

Additional information

3(1) A report of required work relating to the activities set out in Column 1 of the following table must include the additional information set out in Column 2:

Table

Column 1 **Activity**	**Column 2** **Additional information required**
Prospecting	– a map, at an acceptable scale, showing (i) the boundaries of the quarry mineral disposition and the identifiable topographical features, and (ii) in relation to those boundaries and features, (A) the location of the area prospected, and (B) the location of traverses; – the location and nature of outcrops examined and mineralization noted; – a report detailing the results of the prospecting program including results of analysis of samples taken, if any.* * See subsection 3(2) of this Schedule.
Trenching or test pitting	– a map, at an acceptable scale, showing (i) the location of trenches or test pits, (ii) the dimensions of trenches or test pits, (iii) the location of sampling, and (iv) the results of analysis of the samples.* * See subsection 3(2) of this Schedule.
Land surveys	– a map, at an acceptable scale, indicating all topographical features pertaining to the quarry mineral disposition, including (i) existing topographical map data, (ii) results of air photo interpretation, (iii) results of field verification of interpretations made from remote sensing data (ground truthing), and (iv) results of accurate landform surveys.

Geological surveys	– maps and information detailing (i) the location, extent and nature of the quarry mineral deposits, (ii) a stratigraphic description of the area, and (iii) a complete sedimentary log of quarry minerals in all open faces encountered or excavated.
Ground geophysical surveys	– maps and information detailing (i) locations, plans and profiles, (ii) all of the raw and corrected data resulting from the work as separate files in the format supplied by the contractor or specific to the equipment used to do the work or compatible with Geosoft database (GDB) and Geosoft grid (GRD) formats, and (iii) interpretation of results.
Drilling	– maps and information detailing (i) locations of drill-holes, (ii) the type of drill used, (iii) complete drill logs with results of all tests and record of the stratigraphic location of samples,* (iv) size of samples or core, (v) location of sample or core storage and directions for access thereto, and (vi) the number of the borehole licence under which the drilling was conducted. * See subsection 3(2) of this Schedule.
Airborne surveys	– maps indicating the location of survey and flight lines, grid in relation to identifiable surface features, astronomical north and scale; – reports including (i) the survey method and procedure and precision control, aircraft speed and ground clearance, type and particulars of airborne instruments, and ground clearance of towed bird where used, (ii) the complete results containing all measurements, compatible with Geosoft database (GDB) and Geosoft grid (GRD) formats, (iii) interpretation of the data, and (iv) the notice of the airborne survey number the survey was conducted under.

Laboratory testing	– information detailing the results of all standard tests for (i) sand and gravel and crushed rock used for aggregate, and (ii) bentonite, clay, coal, gypsum, kaolin, peat, salt, shale, and any other quarry mineral.
Feasibility studies	– information pertaining to (i) prevalent or anticipated market conditions, (ii) distance and costs of haulage to known market, (iii) cost of production at given location, and (iv) cost of site rehabilitation.

3(2) In respect of information for the analysis of samples, if a copy of the assays are received as electronic files from a geochemical laboratory, the electronic files must be submitted in the format supplied by the laboratory or as a delimited ASCII (tab delimited) file.

Form of written report

4(1) A report submitted in paper form must be

(a) typewritten, on consecutively numbered letter-size pages; and

(b) submitted in duplicate, with

(i) one copy bound in a folder with pockets to hold securely any maps or other parts of the report that cannot be conveniently bound, and

(ii) the other copy unbound and suitable for reproduction and microfilming without colour coding of maps or diagrams.

4(2) Despite clause (1)(a), standard record forms, standard tables and maps may be other than letter-size pages, but

(a) the size of an individual map may not exceed 100 cm × 120; and

(b) for airborne surveys, the second copy of a required map may be submitted as a Portable Document Format (PDF) Adobe Acrobat 5.0 (or higher) compatible file.

4(3) Electronic files, as well as electronic copies of maps, that are required to be included with a written report must be submitted in the form prescribed under section 7 of this Schedule.

Form of electronic report

5(1) A report submitted electronically must

(a) be submitted through the use of the Internet site specified by the recorder, in accordance with the terms and conditions of use listed on the site;

(b) be submitted in Portable Document Format (PDF) Adobe Acrobat 5.0 (or higher) compatible files, with the form and layout the same as if it were submitted in paper form under section 4 of this Schedule;

(c) have text, maps, charts, figures, photographs and tables converted to PDF format directly from the application in which they were created;

(d) have assays and analyses received as digital files from a geochemical laboratory converted to PDF format and inserted into the report;

(e) have included as a separate appendix to the report a digital copy of the assays and analyses, in the format supplied by the geochemical laboratory or as a delimited ASCII (tab delimited); and

(f) have included as separate files raw geophysical data, in the format supplied by the geophysical contractor or compatible with Geosoft database (GDB) and Geosoft grid (GRD) formats.

5(2) Data that cannot be converted directly to a PDF file must be scanned in a manner that conforms to all of the following specifications:

(a) a minimum of 300, but no more than 400, dots per inch (DPI);

(b) converted to Adobe Acrobat 5.0 (or higher) format;

(c) embedded into the report in the proper sequence.

5(3) In creating a PDF document, the author must not

(a) assign any passwords or set any document security controls for any PDF document;

(b) create "article threads" in any PDF document;

(c) add form fields or form actions to a PDF document;

(d) add JavaScript to a PDF document;

(e) add page actions to a PDF document;

(f) annotate a PDF document, including embedding or attaching files, text, graphics other than maps or figures required for the report, audio or video files or annotations created with various other mark-up tools.

5(4) Uniform Resource Locator (URL) links may be included in the text of a report for reference purposes only, but only if the URL is hyperlinked and the link is not used as a substitute for data.

Content — metadata set

6 A report that is submitted electronically under section 5 of this Schedule, or any electronic files included with a written report under subsection 4(3) of this Schedule, must include a full and complete set of metadata that permits determination of the significance of all numbers included in the report or file, including detailed definitions of column headings, units, and clear and full legends.

Use of electronic disks

7(1) If a report cannot be submitted electronically because the electronic portal is not available or the file size exceeds the system's capacity, the report must be submitted as follows:

(a) on a Microsoft Windows-compatible CD-ROM, no multisession, read-only, unlabelled disk; or

(b) on a Microsoft Windows-compatible DVD-ROM, no multisession, read-only, unlabelled disk;

with each disk in a jewel case, adequately protected for shipping, with the project name, report title and disposition holder's name on the back of its case.

7(2) A disk must contain one submission only.

Resubmission
8 If, under section 80 of the Act, the recorder determines a report is required to be amended, the amendment must be made to the original report and the entire report, including any required supporting files, must be resubmitted.

Expenses to be reported separately
9(1) A report of required work must be accompanied by a statement of expenditures for credit as required work.

9(2) The statement of expenditures may include the following, if the expenditures are made for the purpose of carrying out required work mentioned in section 1 of this Schedule:

(a) labour and field supervision on the quarry mineral disposition;

(b) supplies used on the quarry mineral disposition;

(c) transportation of supplies from the point of procurement to the quarry mineral disposition;

(d) transportation of personnel, not exceeding the cost from the nearest community served by railway or highway from which transportation is available, to the quarry mineral disposition;

(e) testing and analyses of materials from the quarry mineral disposition;

(f) depreciation of capital equipment providing it does not exceed 10% of the work commitment;

(g) head office supervision and expenses providing they do not exceed 10% of the work commitment;

(h) any other expenditure of a nature similar to any of those described in clauses (a) to (g) as may be approved by the director.

9(3) When the required work on the mineral disposition is personally conducted by the holder of the mineral disposition,

(a) his or her daily work may be credited in the statement of expenditures at a rate equal to

(i) four times the amount earned by a person working the standard hours of work at the minimum wage rate, as prescribed under *Employment Standards Regulation*, Manitoba Regulation 6/2007, or

(ii) an amount approved by the director; and

(b) the holder's transportation expenses in performing the work may be credited in accordance with clauses (2)(c) and (d).

9(4) The statement of expenditures must accompany the report to which the expenditures relate and must be submitted in the same form, written or electronically, as the report.

M.R. 201/2011

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SCHEDULE C

ROYALTY RATES AND REHABILITATION LEVY

The following rates are per tonne, except for peat and amber.

ROYALTY RATES

Quarry Minerals	
Amber — per kilogram	$5.58
Bentonite	0.67
Kaolin	0.67
Other Clays	0.36
Gypsum	0.50
Limestone — greater than 90% calcium carbonate	0.36
Silica Sand — greater than 95% silica content	0.50*
Heavy Mineral Sand containing minerals such as ilmenite, rutile, zircon, garnet, monazite, magnetite, kyanite, tourmaline, sphene, apatite and biotite	0.39*
Coal	0.56
Salt	0.56
Shale	0.36*
Peat — per cubic metre (loose, dry and uncompressed)	0.06
Gravel — including crushed or screened sand and gravel suitable for use (inter alia) in concrete aggregate, asphalt aggregate, mortar sand and railroad ballast	0.50*
Mining Backfill — quarry mineral used in a mining operation as structural fill	0.21
Rock and Stone	
Common Stone — unsized, unsorted broken stone derived from a bedrock quarry operation or boulder type material such as oversize waste from a sand and gravel operation used directly for any purpose other than for manufacturing or metallurgical purpose	0.15
Processed Stone	
(a) screened, crushed or pulverized stone derived from a bedrock quarry for use (inter alia) as aggregate or in manufacturing and metallurgical processes	0.36*
(b) dimension stone which is shaped, cut, sawn or polished for any use	1.07

REHABILITATION LEVY

Rehabilitation levy for production of aggregate quarry mineral, per tonne	0.12**

* A conversion factor of 1.78 tonnes per cubic metre shall be used where quarry mineral production is calculated in cubic metres.

** **Calculation of rehabilitation levy**
Every operator of an aggregate quarry shall remit to the recorder a rehabilitation levy equal to the product of the number of tonnes of aggregate quarry mineral produced multiplied by $0.12.

M.R. 250/96; 165/2001; 179/2002; 8/2006; 59/2013

SCHEDULE D

DEPARTMENT OF INDUSTRY, TRADE AND MINES

QUARRY LEASE

THIS LEASE made in duplicate this day of , 19 .

BETWEEN:

Her Majesty the Queen in right of the
Province of Manitoba, represented by
the Minister of Industry, Trade and Mines

(the "Minister")

of the First Part

- and -

(the "Lessee")

of the Second Part

The parties agree as follows:

1. In this Lease:

(a) "**Act**" means *The Mines and Minerals Act*, Cap. M162 C.C.S.M., as amended, revised or substituted from time to time;

(b) "**regulations**" means regulations made pursuant to the Act, and as amended, revised or substituted from time to time;

2. Subject and pursuant to the Act and regulations, the Minister conveys to the lessee the exclusive right to explore for, develop, and produce the following quarry minerals, namely_____, that are the property of the Crown and are found on or under the land described as:

(the "Lands") and being_____ hectares, more or less, for a term of 10 years, commencing the_____ day of_____ , 19 , renewable in accordance with the Act.

3. The Lessee shall comply with the Act and regulations; including, without restricting the generality of the foregoing, the payment of rent, royalty and rehabilitation levy prescribed thereunder.

4. The Lessee shall and does hereby indemnify and save harmless the Minister against any and all actions, suits, claims or demands that may be brought or made against the Minister for or by reason of any act or thing done or omitted to be done by the Lessee or its agents with respect to the Lands.

5. To be effective and binding, any waiver by the Minister of a breach by the Lessee of any term or condition of this Lease, the Act or the regulations must be in writing. Any such waiver shall extend only to the events of breach enumerated therein and shall not limit or affect the Minister's rights with respect to any other breach.

6. If the Lessee defaults, breaches, fails to perform or observe any term or condition of this Lease, the Act or the regulations, and any such event is not remedied within such notice period as the Minister may give, the Minister may cancel this Lease. Notwithstanding any such cancellation by the Minister, the rights of the Minister against the Lessee shall not be prejudiced and the Minister shall have the full remedies against the Lessee as if the Lease remained in full force and effect.

7. Any notice to a party to this agreement shall be in writing and may be delivered personally, by facsimile transmission or by registered or certified mail that provides confirmation of delivery from Canada Post Corporation at the following addresses:

Minister's Address	Lessee's Address
(Insert Address)	(Insert Address)

8. This Lease shall be interpreted in accordance with the laws of Manitoba.

9. Any amendments to this Lease shall be in writing and signed by both parties.

10. The Lessee shall not assign this lease except with the prior written consent of the Minister which shall not be unreasonably withheld. Any obligations of the Lessee outstanding at the date of any assignment shall remain the responsibility of the Lessee, to the extent the obligations are not performed by the permitted assignee.

11. This Lease shall enure to the benefit of and be binding upon the heirs, executors, administrators, successors and permitted assigns of the parties.

12. Additional clauses:

In witness whereof the Minister and the Lessee have executed this Lease on the dates shown below their respective signatures.

Signed, sealed and delivered
in the presence of:

Her Majesty the Queen in right
of the Province of Manitoba

_____
Witness

_____
Minister of Industry, Trade and Mines

_____
Date

_____
Witness

_____
Lessee

_____
Date

M.R. 179/2002

ANNEXE A

BARÈME DES DROITS, DES LOYERS, DES DÉPÔTS ET DES DÉPENSES

DROITS

1	Demande d'un bail d'exploitation de carrière ou d'une licence d'exploration de carrière (original ou reconductions) — par aliénation de minéraux de carrière	67 $
2	Demande d'exemption de déchéance ou de prorogation de délai — par aliénation de minéraux de carrière	67 $
3	Demande de licence d'exploitation occasionnelle de carrière	33 $
4	Demande de bail de surface	67 $
5	Demande de certificat d'enregistrement — carrière d'agrégat privée	15 $
6	Demande à la Commission	359 $
7	Copie de chaque instrument ou document enregistré	7 $
8	Examen de chaque registre en réponse à une demande téléphonique ou postale	5 $
9	Dépôt d'un rapport des travaux pour une licence d'exploration de carrière — par année	16 $
10	Enregistrement d'un document ou d'un instrument, notamment une cession ou un transfert — par aliénation de minéraux de carrière	15 $
11	Rapport informatique établi par le bureau du registre minier à la suite d'une demande du client comportant des critères de recherche précis	20 $ (plus 0,50 $ par page)
12	Prestation de tout autre service non assujetti à un droit réglementaire facturé sur une base horaire	25 $

LOYERS

(Non remboursables pour quelque motif que ce soit)

(1) Loyer à l'égard d'un premier bail d'exploitation de carrière et des renouvellements pour des minéraux de carrière autres que la tourbe — 27 $ par année pour chaque hectare complet ou partiel.

(2) Loyer à l'égard d'un premier bail d'exploitation de carrière et des renouvellements pour la tourbe — 6,50 $ par année pour chaque hectare complet ou partiel.

(3) Loyer à l'égard d'un bail de surface — 7 $ par année pour chaque hectare complet ou partiel, sous réserve d'un minimum de 144 $.

DÉPÔTS

Le dépôt à verser avec une demande de licence d'exploration de carrière est de 1 000 $ ou de 25 $ par hectare, suivant le plus élevé de ces montants.

DÉPENSES

Les dépenses à engager pour les travaux obligatoires à l'égard d'une licence d'exploration de carrière sont les suivantes :

(1) 12 $ par hectare complet ou partiel pour la première année.

(2) 24 $ par hectare complet ou partiel pour la deuxième année.

(3) 36 $ par hectare complet ou partiel pour la troisième année.

R.M. 250/96; 8/2006; 201/2011; 59/2013

ANNEXE B

TRAVAUX OBLIGATOIRES ET RAPPORTS DES TRAVAUX

Activités constituant des travaux obligatoires

1 Les activités indiquées ci-après constituent des travaux obligatoires lorsqu'elles sont accomplies à des fins d'exploration et de mise en valeur d'une aliénation de minéraux de carrière :

a) prospection;

b) creusement de tranchées ou de trous de prospection;

c) arpentage;

d) levés géologiques;

e) levés géophysiques du terrain;

f) forages d'essai des couches;

g) essais en laboratoire;

h) études de faisabilité;

i) toute autre activité approuvée par le directeur.

Contenu et format du rapport des travaux obligatoires

2(1) Le rapport des travaux obligatoires :

a) est présenté :

(i) soit sur support papier, auquel cas le rapport est conforme aux exigences de l'article 4 de la présente annexe,

(ii) soit sur support électronique, auquel cas le rapport est conforme aux exigences de l'article 5 de la présente annexe;

b) contient des parties paginées sans interruption, tel que le prévoit la colonne 1 du tableau suivant, qui contiennent les renseignements prévus à la colonne 2.

Tableau	
Colonne 1 Parties	**Colonne 2 Contenu obligatoire**
Page titre	– Le titre du projet; – l'emplacement de l'aliénation de minéraux de carrière; – la nature générale du rapport; – le nom et l'adresse du titulaire de l'aliénation (de minéraux de carrière); – le nom de l'auteur du rapport; – la ou les dates de l'exécution des travaux obligatoires.
Table des matières	– Conformément à la pagination consécutive utilisée dans le rapport, la liste des principales parties du rapport, des diagrammes, des rapports de sondage ou de toute autre documentation, y compris les annexes numérotées, les cartes, les graphiques et les autres illustrations.
Sommaire des travaux obligatoires visés par le rapport	– L'emplacement géographique général et l'accès à l'aliénation de minéraux de carrière; – une carte repère, dressée à une échelle d'au plus 1/20 000 et d'au moins 1/250 000, indiquant les limites de l'aliénation par rapport aux caractéristiques topographiques facilement reconnaissables; – le numéro d'enregistrement de l'aliénation; – la description de la propriété comprenant le nom du présent propriétaire, l'exploitant, la propriété et la substance ciblée; – un sommaire des travaux obligatoires comprenant les données suivantes : (i) dans le cas des études géophysiques, le nombre total des kilomètres de la limite arpentée pour chaque type d'arpentage; (ii) dans le cas des forages, le nombre total des trous de forage déclarés et le total des mètres de forage; (iii) dans le cas des levés géologiques, l'échelle de cartographie et la zone totale arpentée; (iv) dans le cas des prospections, la zone totale prospectée.
Données techniques et interprétation	– Selon l'enquête, le but, les résultats, l'interprétation et les conclusions, tel que l'exige la présente annexe.
Qualités et titres de l'auteur du rapport	– Les qualités et les titres de l'auteur du rapport doivent être appuyés par des documents.

Liste des logiciels utilisés	– La liste des logiciels et des versions utilisés pour l'exécution des travaux obligatoires et la rédaction du rapport.
Autres renseignements	– Les autres renseignements requis conformément à l'article 3 de la présente annexe.

2(2) Le texte et les renseignements liés aux cartes que contient un rapport sont présentés de manière claire pour que l'emplacement et les résultats des travaux soient clairs et lisibles.

Autres renseignements

3(1) Le rapport des travaux obligatoires à l'égard des activités mentionnées à la colonne 1 du tableau qui suit comprend les autres renseignements mentionnés à la colonne 2.

Tableau

Colonne 1 **Activités**	**Colonne 2** **Autres renseignements requis**
Prospection	– Une carte, dressée à une échelle appropriée, indiquant : (i) les limites de l'aliénation de minéraux de carrière et les caractéristiques topographiques identifiables; (ii) à l'égard de ces limites et de ces caractéristiques : (A) l'emplacement de la zone prospectée, (B) l'emplacement des cheminements; – l'emplacement et la nature des affleurements minéraux examinés et des minéralisations observées; – un rapport donnant le détail des résultats du programme de prospection, y compris les résultats de l'analyse des échantillons prélevés, le cas échéant.* * Voir le paragraphe 3(2) de la présente annexe.
Creusement de tranchées ou de trous de prospection	– Une carte, dressée à une échelle appropriée, indiquant : (i) l'emplacement des tranchées ou des trous de prospection; (ii) les dimensions des tranchées ou des trous de prospection; (iii) l'emplacement des échantillons; (iv) les résultats de l'analyse des échantillons.* * Voir le paragraphe 3(2) de la présente annexe.

Arpentage	– Une carte, dressée à une échelle appropriée, indiquant toutes les caractéristiques topographiques de l'aliénation de minéraux de carrière, y compris : (i) les données de la carte topographique existante; (ii) les résultats de la lecture de photocopie aérienne; (iii) les résultats des vérifications sur le terrain des lectures des données recueillies par la télédétection (données de terrain); (iv) les résultats des cartes morphographiques exactes.
Levés géologiques	– Des cartes et des renseignements précisant : (i) l'emplacement, l'étendue et la nature des gisements de minéraux de carrière; (ii) la stratigraphie de la zone; (iii) le profil sédimentaire complet des minéraux de carrière à tous les fronts de percement.
Levés géophysiques du terrain	– Des cartes et des renseignements précisant : (i) les emplacements, les plans et les profils; (ii) les données non traitées et les données corrigées résultant des travaux présentées en tant que fichiers séparés selon le format que l'entrepreneur fournit ou qui est spécifique à l'équipement utilisé pendant les travaux ou compatible avec la base de données Geosoft (GDB) et les formats de grille Geosoft (GRD); (iii) l'interprétation des résultats.
Forages	– Des cartes et des renseignements précisant : (i) l'emplacement des trous de forage; (ii) le type de trépan utilisé; (iii) les rapports de sondage complets et les résultats de tous les essais ainsi que le rapport de l'emplacement stratigraphique des échantillons;* (iv) les dimensions des échantillons ou des carottes; (v) l'emplacement du lieu d'entreposage des échantillons ou des carottes et les instructions pour s'y rendre; (vi) le numéro de permis de forage de trou de sonde en vertu duquel le forage a été effectué. * Voir le paragraphe 3(2) de la présente annexe.

Prospections aéroportées	– Des cartes de l'emplacement du levé et les lignes de vol, le quadrillage étant établi par rapport aux caractéristiques reconnaissables du terrain, au nord astronomique et à l'échelle; – des rapports comprenant : (i) la méthode et la procédure appliquées pour effectuer les levés et en contrôler la précision, la vitesse et la hauteur de vol de l'aéronef, le type et les caractéristiques des instruments aéroportés utilisés, ainsi que la distance entre le magnétomètre aéroporté et le sol, le cas échéant; (ii) les résultats complets comprenant toutes les mesures compatibles avec la base de données Geosoft (GDB) et les formats de grille Geosoft (GDB); (iii) l'interprétation des données; (iv) l'avis du numéro de la prospection aéroportée sous lequel la prospection s'est effectuée.
Essais en laboratoire	– Des renseignements précisant les résultats de tous les essais habituels se rapportant : (i) au sable, au gravier et à la roche concassée utilisés comme agrégats; (ii) à la bentonite, à l'argile, au charbon, au gypse, au kaolin, à la tourbe, au sel, aux schistes argileux et à tout autre minéral de carrière.
Études de faisabilité	– Des renseignements pertinents sur : (i) l'état actuel ou anticipé du marché; (ii) distance à parcourir pour le transport jusqu'à un point de vente connu et les coûts correspondants; (iii) les coûts de production à l'emplacement donné; (iv) les coûts de remise en état des lieux.

3(2) Dans le cas des renseignements de l'analyse des échantillons, si des copies des docimasies sont reçues sur support électronique de la part d'un laboratoire de géochimie, les fichiers électroniques sont présentés selon le format fourni par le laboratoire ou en format ASCII (valeurs séparées par des tabulations).

Format du rapport — support papier

4(1) Tout rapport présenté sur support papier :

a) est dactylographié sur papier de format commercial avec pagination consécutive;

b) est remis en deux exemplaires, dont :

(i) un exemplaire relié dans une chemise munie de pochettes dans lesquelles sont insérées les cartes et les autres pièces qui ne peuvent, à toutes fins pratiques, être reliées,

(ii) un exemplaire non relié pouvant être reproduit et mis sur microfilm sans codage couleur des cartes ou des diagrammes.

4(2) Malgré l'alinéa 1a), les feuilles type de registre, les tableaux types et les cartes peuvent être présentés sur du papier qui n'est pas de format commercial. Toutefois :

a) les dimensions des cartes individuelles ne peuvent être supérieures à 100 cm par 120 cm;

b) en ce qui concerne les prospections aéroportées, la deuxième copie de la carte requise est présentée à l'aide d'un fichier compatible avec le format PDF d'Adobe Acrobat (version 5 ou ultérieure).

4(3) Les fichiers électroniques ainsi que les copies électroniques des cartes qui doivent accompagner le rapport écrit sont fournis selon le format prévu à l'article 7 de l'annexe.

Format du rapport électronique — support électronique

5(1) Tout rapport présenté sur support électronique :

a) est remis par le biais d'un site Internet qu'indique le registraire conformément aux modalités d'utilisation du site;

b) est remis à l'aide de fichiers compatibles avec le format PDF d'Adobe Acrobat (version 5 ou ultérieure) dont le format et la mise en page sont identiques à ceux des rapports présentés sur support papier conformément à l'article 4 de la présente annexe;

c) contient du texte, des cartes, des diagrammes, des graphiques, des photographies et des tableaux convertis directement en format PDF à partir de l'application qui a été utilisée pour les créer;

d) contient des docimasies et des analyses reçues en tant que fichiers numériques de la part d'un laboratoire de géochimie, lesquels ont été convertis en format PDF et insérés dans le rapport;

e) comprend une annexe séparée contenant une copie numérique des docimasies et des analyses, selon le format que fournit le laboratoire ou en format ASCII (valeurs séparées par des tabulations);

f) comprend des fichiers séparés sur les données géophysiques non traitées, selon le format que l'entrepreneur géophysique fournit ou qui est compatible avec la base de données Geosoft (GDB) et les formats de grille Geosoft (GDB).

5(2) Les données qui ne peuvent être converties directement en fichier PDF sont lues optiquement de manière à répondre aux exigences suivantes :

a) posséder une résolution d'au moins 300 points par pouce (ppp), mais d'au plus 400 ppp;

b) être converties au format Adobe Acrobat (version 5 ou ultérieure);

c) être insérées dans le rapport dans l'ordre approprié.

5(3) L'auteur qui crée un document en format PDF :

a) n'y attribue aucun mot de passe ni contrôle de sécurité;

b) n'y ajoute pas de fils d'article;

c) n'y ajoute pas de champs de formulaire ni de propriétés d'actions;

d) n'y ajoute pas de scripts en langage JavaScript;

e) n'y ajoute pas de boutons d'action;

f) ne l'annote pas, notamment en ajoutant ou en incorporant des fichiers, du texte, des graphiques autres que les cartes et les graphiques qui sont requis pour le rapport, des fichiers audio ou vidéo ou des annotations créées grâce à d'autres outils de commentaire ou d'annotation.

5(4) Les liens URL peuvent être insérées dans le texte d'un rapport à titre de références, mais seulement s'ils sont sous forme d'hyperliens et qu'ils ne remplacent pas de données.

Contenu — ensemble de métadonnées

6 Tout rapport présenté sur support électronique conformément à l'article 5 de la présente annexe ou tout autre fichier électronique inclus dans un rapport écrit en vertu du paragraphe 4(3) de la présente annexe comprennent un ensemble de métadonnées complètes qui permettent de vérifier le sens des chiffres inclus dans le rapport ou le fichier, y compris des définitions détaillées des en-têtes de colonnes, des unités ainsi que des légendes claires et complètes.

Usage de disques électroniques

7(1) Tout rapport qui ne peut être présenté sur support électronique parce que le portail électronique n'est pas disponible ou que la taille du fichier dépasse la capacité du système est présenté sur un CD-ROM ou un DVD-ROM compatible avec Microsoft Windows qui n'est pas un disque multi-session, qui est en lecture seule et sur lequel aucune étiquette n'est apposée. Le disque est placé dans un boîtier cristal qui est convenablement protégé pour l'expédition et sur lequel est indiqué, à l'arrière, le nom du projet, le titre du rapport et le nom du titulaire de l'aliénation.

7(2) Les disques ne contiennent qu'une seule demande.

Rapport remis de nouveau

8 Lorsque le registraire détermine, en vertu du paragraphe 80 de la *Loi*, qu'un rapport doit être modifié, la modification est apportée au rapport original et le rapport complet, y compris les fichiers requis à l'appui de la demande, est remis de nouveau.

Frais déclarés séparément

9(1) Tout rapport de travaux obligatoires est accompagné de l'état des dépenses engagées à titre de crédit de travaux obligatoires.

9(2) L'état des dépenses engagées dans le but d'exécuter des travaux obligatoires mentionnés à l'article 1 de la présente annexe peut comprendre :

a) la supervision de la main-d'œuvre et des chantiers de l'aliénation de minéraux de carrière;

b) les approvisionnements utilisés dans l'aliénation;

c) le transport des approvisionnements depuis le point d'acquisition jusqu'à l'aliénation;

d) le transport du personnel jusqu'à l'aliénation, jusqu'à concurrence de ce qu'il en coûterait pour transporter les employés à partir de la localité la plus près desservie par une route ou un chemin de fer d'où le transport est offert;

e) les essais et les analyses des matériaux provenant de l'aliénation;

f) l'amortissement des biens d'équipement, à la condition qu'il ne dépasse pas 10 % des travaux obligatoires;

g) la supervision et les dépenses du siège social, à la condition qu'elles ne dépassent pas 10 % des travaux obligatoires;

h) les autres dépenses de nature similaire à celles décrites aux alinéas a) à g) que peut approuver le directeur.

9(3) Lorsque les travaux obligatoires visant l'aliénation de minéraux de carrière sont exécutés par le titulaire de l'aliénation lui-même :

a) ses travaux quotidiens peuvent être crédités dans l'état des dépenses à un taux qui est égal :

(i) soit à quatre fois le montant réalisé par une personne qui travaille pendant les heures normale de travail et qui reçoit le salaire minimum prévu au *Règlement sur les normes d'emploi*, *R.M.* 6/2007,

(ii) soit au montant qu'approuve le directeur;

(b) les dépenses de transport qu'il engage dans le but d'exécuter des travaux obligatoires peuvent êtres créditées en vertu des alinéas (2)c) et d).

9(4) L'état des dépenses est joint au rapport auquel les dépenses sont liées et il est remis dans le même format que le rapport, soit sur support papier ou sur support électronique.

R.M. 201/2011

Suite à la page 42.4.

ANNEXE C

REDEVANCES ET COTISATIONS DE REMISE EN ÉTAT

Les taux sont indiqués pour une tonne métrique, sauf pour la tourbe et l'ambre.

REDEVANCES

Minéraux de carrière

Ambre — par kilogramme	5,58 $
Bentonite	0,67 $
Kaolin	0,67 $
Autres types d'argile	0,36 $
Gypse	0,50 $
Pierre à chaux contenant plus de 90 % de carbonate de calcium	0,36 $
Sable siliceux contenant plus de 95 % de silice	0,50 $*
Sables de minéraux lourds contenant des minéraux comme l'ilménite, le rutile, le zircon, le grenat, la monazite, la magnétite, la kyanite, la tourmaline, le sphène, l'apatite et la biotite	0,39 $*
Charbon	0,56 $
Sel	0,56 $
Schiste argileux	0,36 $*
Tourbe — par mètre cube (meuble, sèche et non comprimée)	0,06 $
Gravier — y compris le sable et le gravier concassés ou tamisés pouvant servir notamment d'agrégat de béton ou d'asphalte, de sable à mortier ou de ballast de voie ferrée	0,50 $*
Remblai minier — minéraux de carrière servant de matériaux de remblayage de construction dans les exploitations minières	0,21 $

Roche et pierre

Pierre commune — pierre cassée, sans classification de taille et non triée, provenant du socle rocheux d'une carrière ou matériaux de type galet, comme les gros rebuts de carrières de sable et de gravier, utilisés à des fins autres que celles de la fabrication ou de la métallurgie	0,15 $
Pierre traitée :	
a) pierre tamisée, concassée ou pulvérisée provenant d'une carrière et utilisée notamment comme agrégats ou dans les domaines de la fabrication ou de la métallurgie	0,36 $*
b) pierre d'échantillon taillée, coupée, sciée ou polie pour un usage quelconque	1,07 $

COTISATIONS DE REMISE EN ÉTAT

Cotisation de remise en état pour la production d'agrégats de minéraux de carrière — par tonne métrique	0,12 $**

* Le facteur de conversion de 1,78 tonne métrique par mètre cube est utilisé pour calculer la quantité de minéraux de carrière en mètres cubes.

** **Calcul de la cotisation de remise en état**
Les exploitants d'une carrière d'agrégats doivent remettre au registraire une cotisation de remise en état correspondant au produit obtenu en multipliant le nombre de tonnes métriques d'agrégats de minéraux de carrière extraites par 0,12 $.

R.M. 250/96; 165/2001; 179/2002; 8/2006; 59/2013

ANNEXE D

MINISTÈRE DE L'INDUSTRIE, DU COMMERCE ET DES MINES

BAIL D'EXPLOITATION DE CARRIÈRE

LE PRÉSENT BAIL, fait en double exemplaire, a été conclu le_____ 19___

ENTRE :

Sa Majesté la Reine du chef de la
province du Manitoba, représentée
par le ministre de l'Industrie, du Commerce et des Mines

(ci-après appelé le « ministre »)

et

(ci-après appelé le « preneur à bail »).

Les parties aux présentes conviennent de ce qui suit :

1. Les définitions qui suivent s'appliquent au présent bail.

a) « **Loi** » La plus récente version de la *Loi sur les mines et les minéraux*, c. M162 de la C.P.L.M.

b) « **règlements** » La version la plus récente des règlements pris en application de la *Loi*.

2. Sous réserve de la *Loi* et des règlements, le ministre confère au preneur à bail le droit exclusif d'explorer et de mettre en valeur le bien-fonds décrit ci-après et d'en extraire les minéraux de carrière suivants, à savoir_____, qui appartiennent à la Couronne et qui s'y trouvent; le bien-fonds en question (ci-après appelé le « bien-fonds »), constitué plus ou moins de_____ hectares, est décrit comme suit :

Le présent bail, conclu pour une période de 10 ans, commence le_____ 19 ___ et peut être renouvelé conformément à la *Loi*.

3. Le preneur à bail s'engage à se conformer à la *Loi* et aux règlements et, sans préjudice de la portée générale de ce qui précède, à payer le loyer, les redevances et les cotisations de remise en état réglementaires.

4. Le preneur à bail s'engage par les présentes à dédommager le ministre et à le mettre à couvert de toute action, poursuite, demande ou revendication qui découlerait d'un acte, d'une chose ou d'une omission de sa part ou de la part de l'un de ses mandataires relativement au bien-fonds.

5. Toute renonciation de la part du ministre à sanctionner un manquement du preneur à bail à une condition, à une disposition ou à une stipulation du présent bail, de la *Loi* ou des règlements n'est valide et exécutoire que si elle est faite par écrit. Une telle renonciation ne s'applique qu'au manquement visé et n'influe pas sur les droits du ministre et ne les restreint pas en ce qui concerne les autres manquements.

6. Le ministre se réserve le droit de résilier le présent bail si le preneur à bail manque, omet de se conformer ou commet une infraction à une condition ou à une disposition du présent bail, de la *Loi* ou des règlements et qu'il n'y remédie pas au cours du délai qu'il peut lui accorder. La résiliation du bail par le ministre ne porte nullement atteinte à ses droits à l'égard du preneur à bail; il continue à bénéficier de tous les recours contre le preneur à bail, comme si le bail était toujours en vigueur.

7. Les avis à l'une ou l'autre des parties au présent bail sont donnés par écrit à une des adresses mentionnées ci-après et peuvent être signifiés à personne, transmis par télécopieur ou expédiés par courrier certifié ou recommandé sous réserve de la confirmation de leur remise par Postes Canada :

Adresse du ministre	Adresse du preneur à bail
(insérer l'adresse)	(insérer l'adresse)

8. Le présent bail doit être interprété en conformité avec les lois du Manitoba.

9. Les modifications apportées, le cas échéant, au présent bail doivent être faites par écrit et signées par les deux parties.

10. Il est interdit au preneur à bail de céder le présent bail sans le consentement préalable du ministre qui ne le refusera pas sans raison valable. Le preneur à bail demeurera responsable des obligations qu'il n'aura pas encore remplies au moment de la cession et que le cessionnaire n'assumera pas.

11. Le présent bail est au profit et à la charge des héritiers, exécuteurs, administrateurs, successeurs et cessionnaires des parties.

12. Clauses additionnelles :

En foi de quoi le ministre et le preneur à bail ont signé le présent bail aux dates indiquées sous leur titre respectif.

Signé, scellé et délivré
en présence de :

Sa Majesté la Reine
du chef du Manitoba

Témoin

Ministre de l'Industrie, du Commerce et des Mines

Date

Témoin

Preneur à bail

Date

R.M. 179/2002

BY-LAW NO – 8-15

OF THE

RURAL MUNICIPALITY OF ROSSER

SECTION 1 PREAMBLE

BEING a By-Law of the Rural Municipality of Rosser for the purpose of regulating Quarry Operations in the Municipality with respect to enhancing safety, public health, welfare, protection and well-being of people, safety and protection of property, and to minimize social impacts upon adjoining land uses (land use compatibility) including, but not limited to:

1. regulating, approving and/or prohibiting Quarry Operations;

2. prescribing measures to be taken when Quarry Operations are to be established, created and/or operated or when a Quarry is not being operated;

3. prescribing measures to mitigate the social impacts and effects of Quarry Operations and enhancing safety, public health, welfare, protection and well-being of people, the safety and protection of property and to minimize unreasonable effects upon adjoining land uses (land use compatibility);

4. to control, regulate or prohibit the removal and/or deposition of Topsoil from lands within the Municipality;

WHEREAS Section 231 of the Act provides council of a municipality with the power to pass by-laws that give broad authority to the council and to respect its right to govern the municipality in whatever way council considers appropriate, within the jurisdiction given to it under the Act and other Acts;

AND WHEREAS Section 232(1) of the Act authorizes council of a municipality to pass by-laws for municipal purposes respecting, in part, the safety, health, protection and well being of people, and the safety and protection of property and, subject to Section 233 of the Act, activities or things in or on private property;

AND WHEREAS Subsection 232(1) of the Act provides, in relevant parts, as follows:

> Spheres of Jurisdiction:
>
> 232(1) A council may pass by-laws for municipal purposes respecting the following matters:
>
> (a) the safety, health, protection and well-being of people, and the safety and protection of property;
>
> (b) people, activities and things in, on or near a public place or a place open to the public, including parks, municipal roads, recreation centres, restaurants, facilities, retail stores, malls, and private clubs and facilities that are exempt from municipal taxation;
>
> (c) subject to section 233, activities or things in or on private property;
>
> (c.1) subject to section 233.1, the condition and maintenance of vacant dwellings and non-residential buildings;
>
> (c.2) subject to section 233.2, the conversion of rental units into units under *The Condominium Act*;
>
> (d) municipal roads, including naming the roads, posting the names on public or private property, and numbering lots and buildings along the roads;
>
> (e) private works on, over, along or under municipal roads;
>
> (f) property adjacent to highways or municipal roads, whether the property is publicly or privately owned;
>
> (g) the operation of off-road vehicles on public or private property;
>
> (h) drains and drainage on private or public property;
>
> (i) preventing and fighting fires;

(j) the sale and use of firecrackers and other fireworks, the use of rifles, guns, and other firearms, and the use of bows and arrows and other devices;

(k) wild and domestic animals and activities in relation to them, including by-laws differentiating on the basis of sex, breed, size or weight;

(l) public utilities;

(m) local transportation systems;

(n) businesses, business activities and persons engaged in business;

(o) the enforcement of by-laws.

AND WHEREAS Section 232(2) of the Act allows, in part, that a council of a municipality may pass a by-law that regulates or prohibits activities and provides for a system of licences, permits and approvals.

AND WHEREAS Section 232(2) of the Act states:

Exercising by-law making powers:

232(2) Without limiting the generality of subsection (1), a council may in a by-law passed under this Division:

(a) regulate or prohibit;

(b) adopt by reference in whole or in part, with any changes the council considers necessary or advisable, a code or standard made or recommended by the Government of Canada or a province or a recognized technical or professional organization, and require compliance with the code or standard;

(c) deal with any development, activity, industry, business, or thing in different ways, or divide any of them into classes and deal with each class in different ways;

(d) establish fees or other charges for services, activities or things provided or done by the municipality or for the use of property under the ownership, direction, management or control of the municipality;

(e) subject to the regulations, provide for a system of licences, permits or approvals, including any or all of the following:

(i) establishing fees, and terms for payment of fees, for inspections, licences, permits and approvals, including fees related to recovering the costs of regulation,

(ii) establishing fees for licences, permits and approvals that are higher for persons or businesses who do not reside or maintain a place of business in the municipality,

(iii) prohibiting a development, activity, industry, business or thing until a licence, permit or approval is granted,

(iv) providing that terms and conditions may be imposed on any licence, permit or approval, and providing for the nature of the terms and conditions and who may impose them,

(v) providing for the duration of licences, permits and approvals and their suspension or cancellation or any other remedy, including undertaking remedial action, and charging and collecting the costs of such action, for failure to pay a fee or to comply with a term or condition or with the by-law or for any other reason specified in the by-law, and

(vi) providing for the posting of a bond or other security to ensure compliance with a term or condition;

(f) except where a right of appeal is already provided in this or any other Act, provide for an appeal and the body that is to decide the appeal, and related matters;

(g) require persons who do not reside or have a place of business in the municipality to report to the municipal office before conducting business in the municipality; and

(h) require pawnbrokers to report all transactions by pawn or purchase to the head of council or to the police.

AND WHEREAS Section 233 of the Act provides, in part, that a by-law under clause 232(1)(c), may contain provisions only in respect of, in part, the removal of Topsoil;

AND WHEREAS Section 233 of the Act states in part:

> 233 A by-law under clause 232(1)(c) (activities or things in or on private property) may contain provisions only in respect of:
>
> (a) the requirement that land and improvements be kept and maintained in a safe and clean condition;
>
> (b) the parking and storing of vehicles, including the number and type of vehicles that may be kept or stored and the manner of parking and storing;
>
> (c) the removal of top soil; and
>
> (d) activities or things that in the opinion of the council are or could become a nuisance, which may include noise, weeds, odours, unsightly property, fumes and vibrations.

AND WHEREAS Section 236(1) of the Act states in part:

> 236(1) Without limiting the generality of clause 232(1)(o) (enforcement of by-laws), a by-law passed under that clause may include provisions
>
> (a) providing for procedures, including inspections, for determining whether by-laws are being complied with; and
>
> (b) remedying contraventions of by-laws, including
>
> (i) creating offences,
>
> (ii) subject to the regulations, providing for fines and penalties, including the imposition of a penalty for an offence that is in addition to a fine or imprisonment, so long as the penalty relates to a fee, rate, toll, charge or cost that is associated with the conduct that gives rise to the offence, or related to enforcing the by-law,
>
> (iii) providing that an amount owing under subclause (ii) may be collected in any manner in which a tax may be collected or enforced under this Act,
>
> (iv) seizing, removing, impounding, confiscating and selling or otherwise disposing of plants, animals, vehicles, or other things related to a contravention,
>
> (v) charging and collecting costs incurred in respect of acting under subclause (iv),
>
> (vi) imposing a sentence of imprisonment for not more than six months for the commission of offences or nonpayment of fines.

AND WHEREAS excavations for Quarry Minerals or other minerals and the removal of Topsoil may create a nuisance, unreasonable social impacts on adjoining properties, affect ground water, create hazards for persons, livestock and wildlife in the Municipality or reduce the taxable assessment of the property;

AND WHEREAS in those areas of the Municipality covered by the Rural Zoning By-Law the Municipality has the ability to regulate land uses and prescribe mitigation measures for incompatible land uses, including preventing incompatible land.

AND WHEREAS in those areas covered by the CentrePort Inland Port Zoning By-Law, the Municipality under the direction of the CentrePort Special Planning Area Board has the ability to regulate land uses and prescribe mitigation measures for incompatible land uses, including preventing incompatible land uses.

AND WHEREAS the Municipality has the ability to enforce this By-Law under the Act, *The Planning Act*, C.C.S.M. c. P80, as amended, or any other Statute by which the Municipality may enforce a By-Law;

NOW THEREFORE the Council of the Rural Municipality of Rosser enacts a By-Law as follows:

SECTION 2 SHORT TITLE

1. This By-law may be referred to as the "Quarry Operations By-Law" ("By-Law").

SECTION 3 PURPOSE AND OBJECTIVE OF THE BYLAW

1. The purpose of this By-Law is to:

   a) provide and enforce certain standards and regulations for the orderly and safe extraction of Quarry Minerals from Quarry Operations while protecting public safety, health, social and property impacts, to minimize or ameliorate the potential for those impacts;

   b) ensure that all Quarry Operations remove vegetation and soil in a safe and orderly manner and abide by certain standards and regulations to minimize the negative social and property impacts including the potential to impact ground and surface water flow;

2. It is the objective of this By-Law to:

   a) allow orderly extraction and optimum utilization of Quarry Minerals and Topsoil and to provide for local and regional needs while at the same time minimizing potential property, social and land use impacts;

   b) provide for the establishment and regulation of Quarry Operations within the Municipality;

   c) review and address the regulation of each Quarry Operation appropriate to the particular circumstances of their proposal;

   d) so far as possible, conserve and protect property and the natural environment;

   e) ensure the Quarry Operation implements aggregate extraction and processing plans which include mitigation initiatives to minimize unreasonable social and economic impacts on municipal infrastructure and upon adjoining properties from Quarry Operations;

   f) require designated Quarry Operations to be progressively rehabilitated to a compatible land use during Quarry Mineral extraction and following depletion of the resource;

   g) ensure sustainable development and environmentally responsible extraction;

   h) ensure Quarry Operations make financial contributions towards the costs of the Municipality for enforcement and the impacts and regulation of the Quarry Operation while the extraction activities are undertaken or during any rehabilitation phase.

SECTION 4 APPLICATION TO THE WHOLE MUNICIPALITY

1. This By-Law applies to the whole of the Municipality and where:

   a) the By-Law applies to the area outside the Inland Port Area and is covered by the Rosser Rural Zoning By-Law, as amended, the Quarry Operations shall be considered a Conditional Use;

b) the By-Law applies to the area within the Inland Port Area and covered by the CentrePort Secondary Plan and CentrePort Zoning By-Law, as amended, the Quarry Operations shall be considered a Permitted Use with Specified Standards.

SECTION 5 PERMIT FOR QUARRY OPERATIONS

1. All Persons shall be required to obtain a Quarry Permit from the Municipality when:

   a) operating a new Quarry Operation; or

   b) expanding an existing Quarrying Operation; or

   c) re-opening a Quarry Operation or Quarry Site which has been inactive for 36 months. (Renewed Quarry)

2. A Quarry Permit shall:

   a) not be transferable except in accordance with this By-Law;

   b) not expire unless the Quarry Operation remains Inactive for 36 months;

   c) be subject to revocation in accordance with the provisions of this By-Law.

3. A Lawfully Existing Quarry Operation shall not require a Quarry Permit except in accordance with Section 5 (1) (c) but shall require a Licence for Quarry Operations.

4. If after a Quarry Permit has been issued, or where before the coming into force of this By-Law, a Lawfully Existing Quarry Operation exists but does not have a Quarry Permit in accordance with this By-Law, any Quarry Operator adding an Ancillary Use shall be required to obtain an Ancillary Use Permit.

SECTION 6 PERMIT APPLICATION

1. In order to obtain a Quarry Permit to allow the commencement of a Quarry Operation, each Quarry Operator or their designate must submit an application to the Municipality containing the minimum requirements set out in Schedule “A”.

2. When facilities are required for an Ancillary Use, the Quarry Operator making the application should include in their application all anticipated Ancillary Uses in the Quarry Permit application and these uses shall be approved in accordance with the Ancillary Uses Permit process.

3. Once the Quarry Site Operator has been notified by the Designated Officer that the Quarry Permit Application is deemed complete, the Quarry Operator may commence the Community Consultation Process (“CCP”) set out in Schedule “D”.

SECTION 7 DEVELOPMENT AGREEMENT REQUIRED

1. The Quarry Operator, of a new, expanding or renewed Inactive Quarry Operation shall be required to enter into a Development Agreement with the Municipality prior to issuance of a Quarry Permit, Ancillary Use Permit and/or Transfer Permit.

2. The Quarry Operator shall abide by the terms and conditions of the Development Agreement, including all fees, or other charges for services, activities or things provided or done by the Municipality or for the use of property under the ownership, direction, management or control of the Municipality and for the fees for inspections, licences, permits and approvals, including fees related to recovering the costs of regulation as established by Council and set out in Schedule "F".

3. The Development Agreement shall cover the matters as set forth in Schedule "E" and any further matters that Council of the Municipality considers appropriate.

4. All Development Agreements will provide that pursuant to Section 151(1) of *The Planning Act*, C.C.S.M. c. P80, as amended, the Municipality and/or Quarry Operator shall register the Development Agreement as a caveat at the Winnipeg Land Titles Office.

SECTION 8 LICENCE FOR QUARRY OPERATIONS

1. All Quarry Operators of Quarry Operations shall obtain a Licence from the Municipality annually and abide by the applicable provisions of this By-law as amended from time to time.

2. Council for the Municipality must have regard for the provisions set our in Schedule "E" when deciding whether or not to issue a Licence.

3. Where an Operator of a Quarry Operation is mining less than 1000 metric Tons in any one month and no more than 10,000 metric Tons per year in total, then the Quarry Operator of the Quarry Operations shall pay a Licence fee of no more than $50.00 and Council may in its absolute discretion waive any and/or all of the requirements of this By-Law for Licensing.

SECTION 9 TRANSPORTATON LICENCE

1. All Quarry Operators:

   a) transporting Quarry Minerals on municipal roads shall obtain a Transport Licence from the Municipality and abide by the provisions outlined in Municipality's Transportation By-Law;

   b) shall ensure that all other Persons who haul Quarry Minerals from the Quarry Operation and transport those Quarry Minerals on municipal roads have a Transportation Licence in accordance with the Municipality's Transportation By-Law.

SECTION 10 ANCILLARY USE PERMIT APPLICATION

1. All Quarry Operators shall obtain an Ancillary Use Permit for any Ancillary Use.

2. In order to obtain an Ancillary Use Permit to allow the commencement of an Ancillary Use in a Quarry Operation, each Person must submit an application to the Municipality containing the requirements set out in Schedule "B" and Council may in its absolute discretion waive any and/or all of the requirements of this By-Law for Ancillary Uses.

SECTION 11 TRANSFER OF A PERMIT APPLICATION

1. A Quarry Operator operating a Quarry Operation may transfer the Quarry Permit for a Quarry Operation, with the approval of Council, under a Transfer Permit Application containing the requirements set out in Schedule "C".
2. When considering a Transfer Permit application, Council of the Municipality shall consider:

    a) the Transferee's experience;

    b) the Transferee's consent to be bound by the terms of the original approval for the Quarry Permit and conditions set out in the Development Agreement and confirm their approval by way of an assignment of rights and responsibilities under the Development Agreement.

    c) the ability of the Transferee to provide the Security Deposit and bonding as required under the original Quarry Permit Application or the Ancillary Use Application;

    d) any other factors considered relevant by Council of the Municipality.

3. Council of the Municipality, in its absolute discretion, may waive any or all of these requirements if Transferee demonstrates that they will abide by the original Quarry Permit conditions imposed by the Municipality.

SECTION 12 LICENCE APPLICATION

1. No Person in the Municipality shall operate a Quarry Operation on land that is not Crown land except under the authority of and in accordance with a Licence issued by the Municipality annually under this By-Law.

2. It shall be the Quarry Operator's responsibility to ensure that development and operation within the Quarry Site is in compliance with any conditions of the approval for the Quarry Permit, any Development Agreement, the applicable municipal, provincial and federal laws and regulations.

3. It shall be the Quarry Operator's responsibility to obtain all necessary licences, including the necessary Transportation Licence and the Mining Licence or other provincial or federal permits and licences required for the Quarry Operation.

4. The Designated Officer may issue a Licence if there has been no material change in circumstances in the Quarry Operation or Quarry Site.

5. The Designated Officer must take into account the factors set out in Schedule "E" to this By-Law.

SECTION 13 MINIMUM OPERATIONS PROCEDURE REQUIREMENTS

1. The Quarry Operator shall submit an Operations Plan on a yearly basis for review and acceptance by the Municipality, and shall comply with the following:

a) Blasting

(i) The Quarry Operator shall provide the Municipality a yearly Blasting schedule.

(ii) The Quarry Operator shall provide all surface owners and property owners within 300 feet of the Quarry Operation with a copy of the yearly Blasting schedule.

(iii) No Person shall engage in Blasting unless prior approval to do so is obtained from the Municipality.

(iv) A Designated Officer of the Municipality shall be permitted to enter the Quarry Operations or Quarry Site and monitor the Blasting.

(v) Blasting that exceeds the maximum level of vibration limits as established by provincial regulation or any Environmental Act Licence shall be guilty of an offence against the Quarry Operator set out in section 19 of this By-Law.

(vi) Blasting shall only occur in the Quarry Site from Monday to Friday between the hours of 9:00 a.m. to 4:00 p.m.

(vii) Notwithstanding the aforementioned, there shall be no Blasting on statutory holidays. Emergency Blasting may take place, subject to proper approvals under The Mines and Mineral Act.

b) Hours of Operation

(i) Quarry Operations shall only operate from Monday to Friday between the hours of 6:00 a.m. to 6:00 p.m. and Saturday from 6:00 a.m. to 12:00 p.m., unless specified otherwise in a Development Agreement.

(ii) Quarry Operations shall not be permitted to operate during times outside of those specified in subsection (b)(i) without approval being granted by the Municipality.

c) Statutory Holidays

(i) Notwithstanding the aforementioned, there shall be no Quarry Operations permitted on statutory holidays, with the exception of July 1st. The Quarry Operator may apply to the Municipality for a special one day permit to accommodate unique circumstances as determined by the Municipality.

d) Transportation

(i) The Quarry Operator shall obtain a Transport Licence from the Municipality and abide by the provisions outlined in Municipality's Transportation By-Law;

(ii) The Quarry Operator shall ensure that all other Persons who haul Quarry Minerals from the Quarry Operation and transport Quarry Minerals on municipal roads have a Transportation Licence in accordance with the Municipality's Transportation By-Law.

(iii) The Quarry Operator shall confirm the Transportation Plan and Haul Route Plan showing:

1) a map of any municipal roads or highways to be used during the Quarry Operation for haul routes;

2) the capacity of the transportation system;

3) the location of existing and proposed truck entrances and exits;

4) the location of existing and proposed parking and loading areas;

5) the proposed hauling route plan;

6) any changes to the Transportation Plan/Haul Route;

and any additional information as requested by the Designated Officer pertaining to matters such as traffic volumes and on-going road maintenance projections.

e) Haul Roads

(i) The Quarry Operator shall only use roads designated by the Municipality and at no time shall it use any other roads other than those designated by the Municipality. The Quarry Operator shall also take all reasonable efforts to ensure that any independent contractor(s) hauling from any Quarry Operations use only such roads as designated by the Municipality.

f) Noise

(i) The Quarry Operator shall not exceed the noise levels in excess of those set out in the approved Sound Impact Assessment plan.

g) Earth Berms

(i) Any earth berm to be constructed by the Quarry Operator shall be to standards acceptable to the Municipality.

h) Garbage and Waste Material

(i) The Quarry Operator shall not collect garbage or Waste material, or dump any petroleum product or other pollutant in the Quarry Site. The Quarry Operator shall comply with all federal, provincial and environmental provisions pertaining to, but not limited to, petroleum storage and disposal.

i) Security

(i) The Quarry Operator shall install a steel gate at all entrances to the Quarry Operations which shall be kept closed and locked to prevent access by the general public. The berm and steel gate shall be constructed in such a fashion that it shall be impracticable for vehicular traffic to travel between the gate and the edge of the berm.

j) Weed Control

(i) Weeds shall be controlled pursuant to the requirements of the Municipality under the Act, *The Noxious Weed Act* or other laws of the Province of Manitoba. For this purpose, the top of the berm must be of sufficient size to permit a ½ ton truck to be driven on top of said berm for the purpose of spraying weeds.

SECTION 14 LEGAL AND RELATED COSTS

1. It shall be the responsibility of the Quarry Operator to pay to the Municipality all legal fees and disbursements on a solicitor and client basis incurred by the Municipality in connection with the preparation, carrying out and enforcement of the Development Agreement.

SECTION 15 DESIGNATED OFFICER AND ENFORCEMENT

1. A Designated Officer, for the purpose of carrying out assigned duties:

a) may enter, at any reasonable time, any land, vessel or business premises that is or appears to be used or has or appears to have been used in respect of a Quarry Operation or any activity or use related to Quarry Operations;

b) may require the production of a Licence, a Quarry Permit, any record or document respecting the Quarry Operations or Progressive Rehabilitation, a report or a survey and may inspect and make copies thereof;

c) may, upon giving a receipt therefor, remove any Licence, Quarry Permit, record or document produced under clause (b) and make copies thereof; and

d) may, alone or in conjunction with other persons possessing special or expert knowledge, make examinations, tests or inquiries and take or remove samples of any material.

e) in accordance with the Act, *The Planning Act*, C.C.S.M. c. P80, as amended, The Municipal By-Law Enforcement Act of Manitoba, the Municipality's Enforcement By-Law and any other municipal by-laws, the Designated Officer may take whatever action or measures available by law to the Municipality to remedy a contravention of this By-Law in order to enforce or to prevent a re-occurrence of a contravention of this By-Law.

f) may take action simultaneously under the Act, *The Planning Act*, C.C.S.M. c. P80, as amended, the Municipal By-Law Enforcement Act of Manitoba, the Municipality's Enforcement By-Law and any other legislation or by-law that the Municipality is authorized to enforce.

2. Every person who hinders or obstructs the Designated Officer in the performance of the Designated Officer's duties or furnishes the Designated Officer with false information or refuses to furnish the Designated Officer with information is guilty of an offence.

SECTION 16 ORDER TO REMEDY CONTRAVENTION

1. If a Designated Officer finds that a Quarry Operator is contravening this By-Law or any other legislation or by-law that the Municipality is authorized to enforce, the Designated

Officer may by written Order require a Person or Quarry Operator responsible for the contravention to remedy it if, in the opinion of the Designated Officer, the circumstances so require.

Content of order

2. The Order may:

   a) direct a Person to stop doing something, or to change the way in which the person is doing it;

   b) direct a Person to take any action or measure necessary to remedy the contravention of the Act or by-law, including the removal or demolition of a structure that has been erected or placed in contravention of a by-law and, if necessary, to prevent a reoccurrence of the contravention;

   c) state a time within which the Person must comply with the directions;

   d) state a time within which the Person must comply with the order; and

   e) state that if the Person does not comply with the order within the specified time, the Municipality will take the action or measure at the expense of the Person.

Review of the Order to Remedy by Council

3. A Person who receives a written order under section 16(1) may request the Council of the Municipality to review the Order by written notice within 14 days after the date the order is received. After reviewing the Order, the Council may confirm, vary, substitute or cancel the Order.

Municipality remedying contraventions

4. Where the appeal period has expired or Council confirms the Order and the Quarry Operator does not comply with the Order:

   a) the Municipality may take whatever action or measures are necessary to remedy a contravention of this or any other by-law that the Municipality is authorized to enforce or to prevent a re-occurrence of the contravention, once the Designated Officer has given a written order under section 16(1);

   b) where the Quarry Operator is directed to remedy the contravention and has not complied with the Order within the time specified in the Order; and the appeal period respecting the Order has passed or, if an appeal has been made, and the Order has been confirmed; the Municipality may take any action or measures it deems appropriate including cancelling the Quarry Permit and Licence of the Quarry Operation. In the case of dangerous circumstances the Municipality may take whatever actions or measures it considers necessary to eliminate the danger to public safety caused by the condition, a structure, excavation or hole.

SECTION 17 SUSPENSION OF LICENCE

1. The Municipality may suspend a Licence for any period of time, for any contravention of this By-Law, the site plan or the conditions of the Licence, effective as soon as the notice of the contravention is served upon the Licencee.

SECTION 18 REVOCATION OF LICENCE

1. If a Licencee whose Licence has been suspended has not taken or desisted from taking the action as required within the period of the suspension, the Municipality may revoke the Licence.

SECTION 19 OFFENCES, PENALTIES AND COSTS

1. Any person who contravenes or disobeys, or refuses or neglects to obey any provision of this By-Law or the Order of a Designated Officer shall be guilty of any offence and shall be subject to the penalty provisions set out herein and/or in the Municipality's Enforcement By-law.

2. Every Person who operates Quarry Operations except under the authority of a Licence is guilty of an offence.

3. Every Person who contravenes or permits the contravention of the operation of a Quarry Operation or a condition of the Quarry Permit or Licence is guilty of an offence.

4. Every Person who contravenes this By-Law is guilty of an offence.

5. Penalty:

    a) Every Person who contravenes a provision of this by-law and, if the person is a corporation, every director or officer of the corporation who knowingly concurs in the contravention, is guilty of an offence and on conviction is liable to a fine of not less than $500 and not more that $1,000.00.

    b) Notwithstanding subsection (a), if the Person convicted is a corporation, the corporation is liable to a fine of not less than $1,000.00 and not more than $20,000.00.

    c) Where the contravention, refusal or neglect, omission, or failure continues for more than one day, the Person is guilty of an offence for each day that it continues.

    d) The Municipality may suspend or revoke a Quarry Permit or Licence issued under this By-Law for any breach of the terms and conditions of the Quarry Permit, Development Agreement or of this By-Law.

6. All costs relating to the enforcement of this By-Law, the Act, *The Planning Act*, C.C.S.M. c. P80, as amended, The Municipal By-Law Enforcement Act of Manitoba, the Municipality's Enforcement By-Law and any other municipal by-laws, may be collected by the Municipality as set out in its Enforcement By-Law.

7. In any prosecution under this By-Law, the court may, in addition to imposing a fine under Section 19 of this By-Law, make such order as the court considers proper to obtain compliance with this By-Law, the Site Plan or any condition of a Licence or Quarry Permit.

SECTION 20 RECOVERY OF COSTS

1. All such costs of enforcement shall be deemed an amount owing to the Municipality, added to the real property taxes, and collected and enforced in the same manner as property taxes may be collected and enforced under the Act.

SECTION 21 VALIDITY OF BY-LAW

1. Should any provision of this By-Law be declared to be invalid by a court of competent jurisdiction, it is the intent of Council of the Municipality that it would have passed all other provisions of this By-Law independent of the elimination of any such portion as may be declared invalid.

SECTION 22 INTERPRETATION

1. The inclusion in this By-Law of headings and subheadings is for convenience of reference only and shall not affect the construction or interpretation of this By-Law.

2. In this By-Law, unless the context otherwise requires, words importing the singular include the plural and vice versa and words importing one gender include all genders.

SECTION 23 DEFINITIONS

a) **"Act"** means *The Municipal Act*, C.C.S.M. c. M225, as amended from time to time.

b) **"Ancillary Use"** means uses ancillary to the extraction operation and include but are not limited to:

(iv) stripping, berm construction, screen planting and landscaping, crushing, processing, screening, washing, stockpiling, storage, loading and weighing;

(v) manufacture, stockpiling, warehousing and transporting of ready-mixed concrete, bagged mortar products, concrete block, concrete pavers, concrete pipe, concrete plank, etc;

(vi) importing, grading, processing and stockpiling aggregates to be blended with local aggregates in the production of various products which will increase the effective use of the local aggregates and extend the life of the resource;

(vii) transporting, accepting and recycling products returned from construction sites, including "come-back" asphalt, ready-mixed concrete, bagged mortar products, concrete block, concrete pavers, concrete pipe, concrete plank, etc;

(viii) transporting, accepting, stockpiling and processing recycled construction materials for inclusion in new products;

(ix) offices and sales areas and any buildings or structures;

(x) equipment maintenance areas;

(xi) fuel storage and refueling areas;

(xii) or other uses related to supporting the Quarry extraction process.

c) **"Ancillary Use Permit"** means a permit issued by the Municipality to operate an Ancillary Use within the Municipality.

d) **"Blasting"** means the use of explosives or other explosive methods to excavate, break down or remove rock;

e) **"Council"** means the duly elected council of the Rural Municipality of Rosser;

f) **"Designated Officer"** means the Chief Administrative Officer and the duly appointed Designated Officer, or such other authority as may be lawfully appointed by the Municipality to administer and enforce its by-laws;

g) **"Development Agreement"** means the agreement as drafted pursuant to this By-Law.

h) **"Inactive"** means a Quarry Operation which has not been granted a Licence for 36 consecutive months or a Quarry Operation which has less than 50% of their production in any year based upon the last 3 year production average.

i) **"Inland Port Area"** means the land described in the Schedule pursuant to *The CentrePort Canada Act*, C.C.S.M. c. C44

j) **"Lawfully Existing Quarry Operation"** means a Quarry Operation that was existing prior to the coming into force of this By-Law and had a Licence issued to it by the Municipality and was not Inactive.

k) **"Licence"** means the licence to be issued for a Quarry Operation issued under this By-Law and which such licence may be amended from time to time;

l) **"Licencee**" means a person who holds a valid Licence under this By-Law;

m) **"Mine"** means an opening or excavation in the ground that is established or maintained for the purpose of quarrying and includes

(i) a quarry,

(ii) machinery, plant, buildings, premises, stockpiles, storage facilities, waste dumps or tailings, whether below or above ground, that are used for, or in connection with, mining,

(iii) a crusher, mill, concentrator, furnace, refinery, processing plant or place that is used for, or in connection with, washing, crushing, sifting, drying, oxidizing, reducing, leaching, roasting, smelting, refining, treating.

n) **"Municipality"** means the Rural Municipality of Rosser in the Province of Manitoba.

o) **"Operation Plan"** means the permit application requirements set out at Schedule "A" section 2(i) of this By-Law.

p) **"Person"** includes a corporation, partnership, limited partnership or syndicate and the heirs, executors, administrators or other legal representatives of a person;

q) **"Progressive Rehabilitation"** means plans for Quarry Operations reclamation designed to complete reclamation activities concurrently with the mining activities to the maximum extent feasible.

r) **"Quarry"** means a mine that is an open excavation from which Quarry Minerals are removed;

s) **"Quarry Mineral"** means granular material when in its natural or processed state, including gravel, sand and crushed stone, clay, earth, shale, stone,

limestone, dolostone, sandstone, marble, kaolin, bentonite, gypsum, granite, and rock;

t) **"Quarry Operation(s)"** means all forms of Quarry mining (all excavation of Quarry Mineral) and includes the land on which a Quarry Operation is located. Including the following:

(i) Clearing and grubbing the site of vegetation and structures, as necessary;

(ii) Relocation of infrastructure, as necessary;

(iii) Excavation and transport of the raw Quarry Minerals and materials;

(iv) Excavation, stockpiling, and transporting of other soils materials, including clay and Topsoil, which may be present within the Quarry Site for shipment to sites out of the Quarry Site or for use in reclamation;

(v) Washing, grading and stockpiling Quarry Minerals for sale or later internal use;

(vi) Transporting and stockpiling Waste "fines" for potential later use in reclamation;

(vii) Transporting finished Quarry Minerals internally for subsequent processing and to construction sites beyond the Quarry Site;

(viii) Transporting, accepting, and stockpiling clean, compactable fill materials, typically referred to as "back-hauled", for potential later use in reclamation;

(ix) Transporting, accepting, and stockpiling clean organic soil materials (i.e., peat) for potential later use in reclamation;

(x) Eventual redistribution, compacting, grading of overburden and clean fill materials to reclaim the sites.

u) **"Quarry Operator"** means a person, who, as the owner, lessee, grantee or Licencee of mineral rights or the applicant or holder of a Quarry Permit and Licence, operates a Quarry, but does not include:

(i) a person who receives only a royalty or rent from the person who operates the Quarry;

(ii) an owner of a Quarry that is subject to a lease, grant or licence in favour of the person who operates the Quarry, where the owner does not participate in the operations of the Quarry;

(iii) an owner of land on which a Quarry is operated or an owner of the surface rights pertaining to such land, where the owner has no right or title to minerals situated in the land and does not participate in the Quarry Operation.

v) **"Quarry Permit"** means a permit issued by the Municipality to operate Quarry Operations within the Municipality;

w) **"Quarry Site"** means the area to be mined from the lands on which a Quarry Operation is located.

x) **"Security Deposit"** includes a certified cheque drawn on, or an irrevocable letter of credit given by, a bank or a trust company, credit union or caisse populaire licenced to carry on business in Manitoba;

y) **"Topsoil"** means the natural, normal layer of upper soil which supports or is capable of supporting growth of plant life;

z) **"Transfer Permit"** means a permit issued by the Municipality to transfer Quarry Operations to a Transferee.

aa) **"Transferee"** means the Person who makes a joint application with the Transferor for a Transfer Permit to become the Quarry Operator for the Quarry Operation.

bb) **"Transferor"** means the Person who has been issued the Quarry Permit and/or Licence for a Quarry Operation and makes a joint application with the Tranferee for a Transfer Permit.

cc) **"Transportation Licence"** means a licence issued by the Municipality under the Municipality's Transportation By-Law.

dd) **"Waste"** means all waste material resulting from the operation of the Quarry Site or a wayside pit and includes rejected metal, lumber, and tree stumps.

SECTION 24 COMING INTO FORCE

This By-Law shall come into force on the 6th day of April, 2016.

SECTION 25 REPEAL

1. This By-law hereby repeals sections 3.1, 3.2, 3.3, 3.4, 3.5 of the Rural Municipality of Rosser By-Law No. 11-09.

2. This By-Law hereby repeals the Rural Municipality of Rosser By-Law No. 15-71.

DONE AND PASSED in Council assembled in the Municipal Council Chambers at Rosser, in the Province of Manitoba, this 5th day of April, A.D., 2016.

THE RURAL MUNICIPALITY OF ROSSER

Original signed by "Frances Smee"
FRANCES SMEE, Reeve

Original signed by "Beverley Wells"
BEVERLEY WELLS, Chief Administrative Officer

GIVEN First Reading this 13th day of October, A.D., 2015.

GIVEN Second Reading this 5th day of April, A.D., 2016.

GIVEN Third Reading this 5th day of April, A.D., 2016.

Schedule "A"

PERMIT APPLICATION

and forming part of this By-Law

In order to obtain a Quarry Permit to allow the commencement of a Quarry Operation, each Quarry Operator or their designate must submit an application to the Municipality containing the minimum requirements set out in this Schedule.

1. The Quarry Operator or their designate may apply for a Quarry Permit online through the Municipal Website and include with their application, the following:

    i. a non-refundable fee, in the form of a certified cheque, money order or cash, payable to the Municipality in the amount of $15,000.00 with a confirmation the anticipated professional fees for review of the application will be paid by the Quarry Operator to the Municipality as and when determined by the Municipality in its sole discretion.

    ii. the full names, addresses and contact information of the Persons and any agents who are responsible for the Quarry Permit Application;

    iii. the full names, addresses and contact information of the Persons and any agents who are responsible for the Quarry Operations;

    iv. proof of retention of a Professional Engineer;

2. The Quarry Operator must submit the following information as part of their Application:

    i. A detailed Site and Operation Plan indicating:

        a) The proposed hours of operations for the Quarry Operations;

        b) the boundaries of the Quarry Operation;

        c) the Land area and depth of excavation including a key map and Site Plan showing the Quarry Operations and surrounding Land;

        d) identification of the area in the Quarry Operations to be excavated first and staging of the excavation;

        e) the location and use of existing and proposed buildings and structures on-site, and the location of existing buildings and structures on lands within 800.0 metres (2600.00 ft.) of the site boundaries;

        f) the location of existing and proposed areas for separate stockpiling of Topsoil, overburden stripping and mined material;

        g) the location, width, height and description of existing and proposed landscaped buffers or berming, and existing and proposed entrances and exits, on-site roads and parking and loading areas;

        h) the location of any storage or deposit facilities to be used in storing excavated materials or Topsoil;

i) the nature and location of any Quarry Ancillary Uses as set out in Section 10 of this By-Law;

j) the proposed security measures for the Quarry Operations;

k) the anticipated dust and means to control dust;

ii. Impact Assessments or addendums as follows:

a) Blasting Impact Assessment or addendum demonstrating the proposed blasting procedure, extraction procedure, vibration levels and means to control vibrations;

b) Sound Impact Assessment or addendum demonstrating the anticipated noise and means to control the noise;

c) Visual Impact Assessment or addendum;

iii. Water and Natural Resource Management Plan showing:

a) surface water diversion;

b) groundwater withdrawal;

c) storage and drainage plans;

d) impact assessment of potential effects on water wells, springs, groundwater, surface watercourse and bodies, wetlands, woodlands;

e) impact assessment of potential effects on fish and wildlife habitat; and

f) identification of water wells within a one kilometer radius of the Quarry Site;

iv. An Adaptive Management Plan including technical reports to identify:

a) monitoring plans;

b) mitigation measures;

c) trigger mechanisms; and

d) contingency plans;

v. A Progressive Rehabilitation Plan including:

a) a geotechnical analysis by a Certified Engineering Geologist or Registered Geotechnical Engineer, using Progressive Rehabilitation Guidelines, demonstrating the long-term stability of all final slopes and the slope configuration needed to ensure the safety and revegetation appropriate to the end use of the mined land;

b) the intended staging for Progressive Rehabilitation, and how the Progressive Rehabilitation plan is in compliance with the provincial pit and quarry rehabilitation program standards and any standards established by the Municipality, including the proposed date of final Progressive Rehabilitation for the land and estimates of the Progressive Rehabilitation costs;

vi. Transportation Plan and Haul Route Plan showing :

a) a map of any municipal roads or highways to be used during the Quarry Operation for haul routes;

b) the capacity of the transportation system;

c) the location of existing and proposed truck entrances and exits;

d) the location of existing and proposed parking and loading areas;

e) the proposed hauling route plan;

f) and any additional information as requested by the Designated Officer pertaining to matters such as traffic volumes and on-going road maintenance projections;

vii. Insurance coverage, including:

a) proof of comprehensive liability insurance which lists the Municipality as additional insured, at a minimum of five million dollars ($5,000,000.00);

Schedule "B"

ANCILLARY USE PERMIT

and forming part of this By-Law

1. The Quarry Operator may apply for a Ancillary Use Permit and must provide the following to the Municipality:

    a) a non-refundable fee, in the form of a certified cheque, money order or cash, payable to the Municipality in the amount of $3,000.00 with a confirmation that the anticipated professional fees for review of the Ancillary Use Application will be paid by the Quarry Operator to the Municipality as and when determined by the Municipality, in its sole discretion.

    b) the full names, addresses and contact information of the Persons and any agents who are responsible for the Ancillary Use Permit Application;

    c) the full names, addresses and contact information of the Persons and any agents who are responsible for the Ancillary Use Quarry Operations;

    d) a report to Council of the Municipality setting out:

        i. the nature of the Ancillary Use;

        ii. the impact (if any) any on adjacent land uses with respect to haulage, water supply, noise, dust, odours, lighting and unsightliness;

        iii. an expert statement confirming that the Ancillary Use is located in the least geologically sensitive/vulnerable area to avoid potential accidental releases.

        iv. a review of the most technological means to minimize the potential impact on property from negative effects of dust, chemical spills, run-off on the surface and ground water;

Schedule "C"

TRANSFER PERMIT

and forming part of this By-Law

1. In order to obtain a Transfer Permit to allow the continuation of a Quarry Operation by a Transferee, the Transferee and the Transferor must submit a joint application to the Municipality.

2. The Application shall be accompanied by a non-refundable fee, in the form of a certified cheque, money order or cash, payable to the Municipality in the amount of $3,000.00 with confirmation that the anticipated professional fees for review of the Transfer Permit will be paid by the Transferee or Transferor to the Municipality, as and when determined by the Municipality on its sole discretion.

3. If different from the original Permit Application, the Transferee must meet all the requirements listed in Schedule "A" and Schedule "D" to this By-Law.

4. The Transferee shall confirm in writing to the Municipality their agreement to be bound by the original Quarry Permit terms and conditions.

5. The Transferee shall confirm in writing to the Municipality their agreement to be bound by the terms and conditions set forth in any Development Agreement between the Transferor and the Municipality.

Schedule "D"

NOTIFICATION AND COMMUNITY CONSULTATION

and forming part of this By-Law

1. Once the Quarry Operator has been notified by the Designated Officer that the Quarry Permit Application is deemed complete, the Quarry Operator may commence the Community Consultation Process ("CCP").

2. When the Quarry Operator commences the CCP, the Quarry Operator shall provide to all landowners a minimum of 45 days notice ("Notice") before the date of the Community Consultation Meeting ("CCM"). The Notice shall also provide that the entire Application may be reviewed at the Municipal Office, on the Municipality's website, or an electronic copy may be requested from the Quarry Operator.

3. The Quarry Operator must hold the CCM following the 45 day Notice period.

4. The Notice of the CCM shall be completed at least 45 days prior to the meeting and the Quarry Operator must:

    a) Send the Notice, by registered mail, to all landowners within 2 miles of the boundary of the Property where the Quarry Permit Application applies (the Property); and

    b) Post a sign of the Notice on the site of the Property; and

    c) Publish at least one Notice in a print newspaper of general circulation within the Municipality and at least one Notice in the Winnipeg Free Press.

5. The Notice must contain the format, style, location and procedure for the meeting.

6. Prior to the CCM all interested Persons are invited, no less than 20 days prior to the CCM, to provide in writing to the Quarry Operator any comments, recommendations, suggestions, and/or concerns that arise from a review of the Quarry Operator's Application.

7. Subsequent to the CCM, any interested person may file an objection ("Objection") to the Application, in writing to the Quarry Operator and the Municipality, within 30 days following the CCM.

8. The Quarry Operator shall no sooner than 30 days following the CCM provide the Municipality with documentation demonstrating that the CCM has been completed along with a Community Consultation Report ("CCR") outlining any comments received and any adjustments recommended to the conditions of the Application.

9. If there are Objections to the Application, the Quarry Operator is required to consult with the objectors in an attempt to resolve the Objections. If the Objections are resolved, the Quarry Operator shall obtain written confirmation from the objectors that the Objections have been resolved. The Quarry Operator shall then submit all written confirmations from the objectors and any revisions to the Application to the Municipality.

10. If the Objections are not resolved, the Quarry Operator shall include in their CCR to the Municipality, with copies to the objectors, details of the Quarry Operator's efforts to resolve the objections; the Quarry Operator's position on the Objections; and the Quarry Operator's recommendations for resolving the Objections.

11. The objectors have 30 days from receiving the Quarry Operator's CCR, including all documentation that the Quarry Operator is relying upon, to submit their own recommendations, including all documentation to the Municipality for resolving their Objections. If an objector does not provide its recommendation and documentation within 30 days, the Objection may be resolved by the Municipality on the information received.

12. If the Municipality receives Objections following the CCR, the Municipality has 60 days to provide a decision on how the Objections will be resolved, which may include a hearing to deal with the subject matter of the Objection(s), or in Council's sole and unfettered discretion that no further resolution is necessary and that the Objection(s) are rejected.

13. If a hearing is deemed necessary by Council, the hearing shall be completed and a decision shall be completed by Council within 90 days of the date of the conclusion of the hearing.

14. If the Application relates to Land outside the Rural Municipality of Rosser CentrePort Area Zoning By-Law then a conditional use shall be required and the Quarry Operator shall at the same time as filing the Application for approval under the Quarry Operations By-Law make a separate application for a conditional use. The hearing for the Application under the Quarry Operations By-Law and the hearing for the conditional use are to be heard by Council at the same time.

15. If the Application related to Land inside the Rural Municipality of Rosser CentrePort Area Zoning By-Law then all materials provided to the Municipality by the Quarry Operator and the interested parties will be forwarded to the Special Planning Area Board ("SPA") and the SPA.

16. The Quarry Operator has 2 years from the commencement of the 45 day notification period to provide the Municipality with documentation that the notification and consultation has been completed, including the efforts to resolve Objections. If the Quarry Operator does not meet that deadline, the Application will be returned.

Schedule "E"

LICENCING REQUIREMENTS

and forming part of this By-Law

1. The Municipality must have regard to the following provisions when deciding whether or not to issue an annual Licence :

   i. the effect of the Quarry Operations on adjacent property;

   ii. the effect of the Quarry Operations on nearby communities;

   iii. the suitability of the Progressive Rehabilitation and Final Rehabilitation Plans for the Quarry Operations;

   iv. any possible effects on ground and surface water resources;

   v. any possible effects of the Quarry Operation on agricultural resources;

   vi. any planning and land use considerations;

   vii. the main haulage routes and proposed truck traffic to and from the Quarry Operations;

   viii. the quality and quantity of the Quarry Minerals within the Quarry Operations;

   ix. the drainage provisions approved in the Water and Natural Resource Management Plan;

   x. the site design plan indicating the developments and changes to the Quarry Operations;

   xi. the detailed list of ongoing maintenance to the Quarry Operations;

   xii. the security report detailing the security measures used at the Quarry Site to keep the Quarry Site secure;

   xiii. the reports supplied by the Quarry Operator and any comments provided by the Municipality's advisors;

   xiv. a proponent's history of compliance with previous licences (if any). However, if the previous contravention has been corrected in accordance with the requirements of the *Municipal By-Law*, no regard shall be had to those past contraventions;

   xv. such other matters as are considered appropriate.

2. Council may refuse to grant a Licence where the application:

   i. does not comply with the requirements of this By-Law;

   ii. does not comply with any other Provincial Regulations;

   iii. cannot be adequately serviced by the municipal road and/or drainage system;

iv. lacks adequate data or assurance that groundwater quality or supply will not be adversely affected, and/or;

v. poses a threat of environmental danger to any unique or significant ecological, wildlife, water fowl or fisheries areas, historical site or church.

Schedule "F"

QUARRY OPERATIONS FEES AND CHARGES

and forming part of this By-Law

Costs related to Quarry Operations in this By-law include:

Fees & Charges	
Transportation By-Law Fee	As per By-Law
Topsoil By-Law Fee	As per By-Law
Quarry Permit Fee	$2,000.00 (one time payment)
Annual Quarry Operation Licence Fee	$250.00 (annually)
Transfer Permit Fee	$500.00
Administration of this By-Law Fee	$250.00
Development Agreement	Fees and charges as per Development Agreement

Costs for inspections related to determining compliance with regulations in this By-Law may include:

Fees & Charges	
Building Inspection Fee	As per SIPD
Fire Inspection Fee	As per SIPD
Police Inspection Fee	As per SIPD
Property standards Inspection Fee	As per SIPD

Costs for enforcement of this By-Law include:

Fees & Charges	
Inspection Costs	$250.00 (per inspection)
Investigations related to request for service or complaints	On a per service basis
Legal Fees	On a per service basis
Professional Fees	On a per service basis

Appendix "C"

- Sample Calculations and Typical Blast Layout

Proposed North Perimeter Aggregates Quarry, RM of Rosser, Manitoba

CALCULATION OF MAXIMUM ALLOWABLE EXPLOSIVES/DELAY PERIOD

W_{max} = ((K * (d^e))/PPV)^-1.8

PPV = predicted peak particle velocity **(mm/s)**
K,e = site factors (pre-determined)
d = distance from receptor **(m)**
W_{max} = max. explosive charge per delay **(kg)**

DST's In-house Database

K	d (m)	e	PPV mm/s	w (kg)
350	50	-1.11	12.00	5.72
350	100	-1.11	12.00	22.87
350	150	-1.11	12.00	51.41
350	200	-1.11	12.00	91.34
350	250	-1.11	12.00	142.66
350	300	-1.11	12.00	205.35
350	350	-1.11	12.00	279.42
350	400	-1.11	12.00	364.85
350	450	-1.11	12.00	461.66
350	500	-1.11	12.00	569.83
350	550	-1.11	12.00	689.36
350	600	-1.11	12.00	820.26
350	650	-1.11	12.00	962.51
350	700	-1.11	12.00	1116.12

W_{max} = ((K * (d^e))/PPV)^-1.25

ISEE's D50

K	d (m)	e	PPV mm/s	w (kg)
1140	50	-1.6	12.00	8.43
1140	100	-1.6	12.00	33.72
1140	150	-1.6	12.00	75.86
1140	200	-1.6	12.00	134.87
1140	250	-1.6	12.00	210.73
1140	300	-1.6	12.00	303.45
1140	350	-1.6	12.00	413.03
1140	400	-1.6	12.00	539.47
1140	450	-1.6	12.00	682.76
1140	500	-1.6	12.00	842.92
1140	550	-1.6	12.00	1019.93
1140	600	-1.6	12.00	1213.80
1140	650	-1.6	12.00	1424.53
1140	700	-1.6	12.00	1652.12

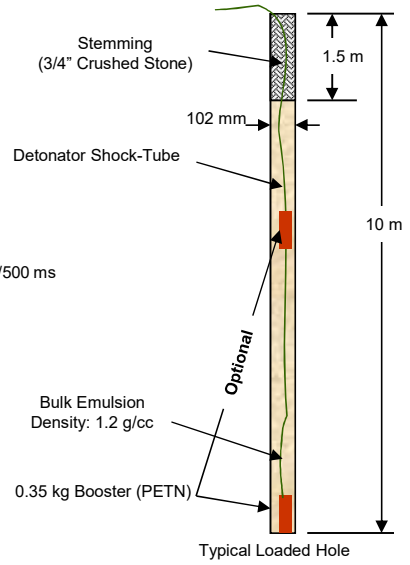
ISEE's D95

K	d (m)	e	PPV mm/s	w (kg)
1725	50	-1.6	12.00	5.02
1725	100	-1.6	12.00	20.09
1725	150	-1.6	12.00	45.20
1725	200	-1.6	12.00	80.36
1725	250	-1.6	12.00	125.57
1725	300	-1.6	12.00	180.81
1725	350	-1.6	12.00	246.11
1725	400	-1.6	12.00	321.45
1725	450	-1.6	12.00	406.83
1725	500	-1.6	12.00	502.26
1725	550	-1.6	12.00	607.74
1725	600	-1.6	12.00	723.26
1725	650	-1.6	12.00	848.82
1725	700	-1.6	12.00	984.43

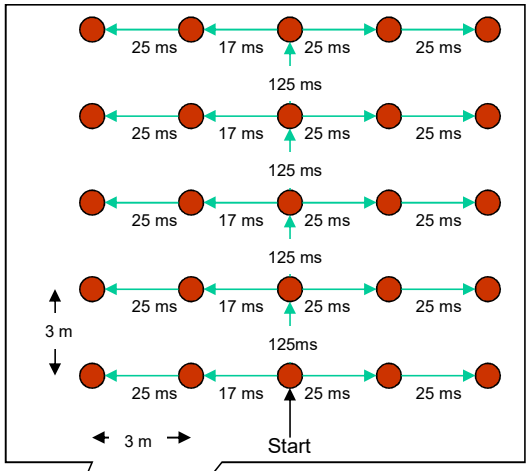
Typical Blasting Plan

Blast Design Parameter Details

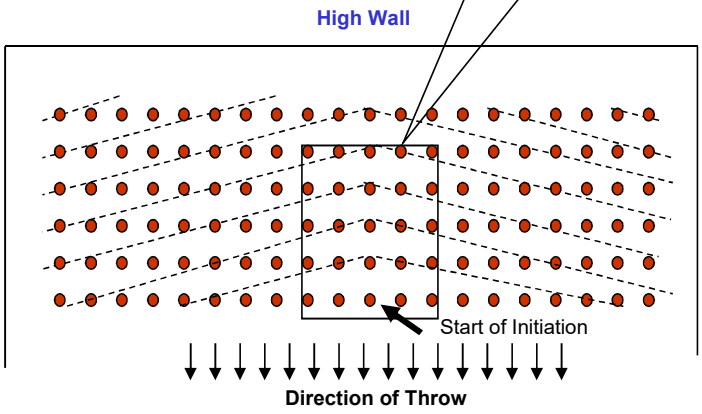
- Pattern: 3 m Burden X 3 m Spacing
- Hole Diameter: 102 mm
- Explosive: Bulk emulsion, d=1.20g/cc
- Detonators: Non-electric Dual Dets 25 ms/500 ms
- Surface Connectors: 17 ms, 125 ms
- Delay Between Holes: 25 ms
- Delay Between Rows: 125ms
- Max. Hole Depth: 10 m Incl. Sub-drill
- Collar: Min. 1.5 m
- Explosive Wt./Delay: 82.85 kg
- Primer: 0.35 kg Booster (PETN)
- No. of Holes: 120 (Typical)
- Direction of Throw: TBD
- Weather Condition: …….
- Wind: …….
- Blaster-In-Charge: …….



Typical Loaded Hole



Sample Detonator/Sequencing Layout



NOT TO SCALE

Appendix "D"

- Author's Resume

Ray Jambakhsh, M.Sc., P.Eng.
Chief Technical Advisor, Sr. Principal

Education & Training

- B.Sc. Mining Engineering, Laurentian University, Sudbury, Ontario. (1984)
- M.Sc. Applied Physics, Laurentian University, Sudbury, Ontario. (1990)
- MIT Executive Management - Pending

Memberships:

- Association of Professional Engineers of Ontario (PEO)
- Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB)
- Designated Consultant by PEO
- International Society of Explosives Engineers (ISEE)
- Licensed Surface Blaster in the Province of Ontario
- Licensed Surface Blaster in the Province of Alberta

Roles:

Ray Jambakhsh has underground and surface mining experience and has been involved in numerical modeling as a rock mechanics engineer for a major Canadian mining firm. He has also been instrumental in design, introduction, and implementation of electric and non-electric sequential blasting techniques for underground (VCR/VRM), open pit and quarry applications, building demolition by blasting, pipeline blasting, marine blasting, and highway blasting projects. He has handled blast vibration monitoring, vibration risk analysis, vibration and noise impact analysis, blasting audits, and blast damage complaints for insurance companies, law firms, government agencies, and contractors. Ray specializes in explosives, explosives demolition, explosion impact analysis, rock fragmentation, rock-face stability, rock blasting and vibrations.

Selected Professional Experience

DST Consulting Engineers Inc., Sudbury ON 2004 to Present

Role: Senior Principal and Senior Rock & Blasting Engineer

Responsibilities: Recognised both nationally and internationally for his blasting expertise, with over 20 years of experience. Responsible for senior review, project management and delivery of blasting and vibration services to the construction, demolition, mining, pipeline, energy and public service sectors, including: blast design; modelling, control and monitoring, vibration and overpressure monitoring, locally and remotely; damage criteria development for vibration; overpressure and flyrock; pre-blast and post-blast surveys; blast damage claim investigation; expert testimony; blast design to optimise fragmentation; dilution and environmental impact; vibration signature analysis and diagnostics; blast performance evaluation and optimization; fragmentation analysis; rock-face stabilization analysis; environmental impact analysis; blast safety and general blast information, training; blast demolition design.

Ray-Tech Engineering Limited, Sudbury ON 2003 to 2004

Role: President – Blasting Services to the Underground and Surface Mining Industries

Responsibilities: Rock mechanics engineering including numerical modelling. Instrumental in the design, introduction and implementation of electric and non-electric sequential blasting techniques for underground (VCR/VRM) open pit and quarry applications, building demolition, blasting, pipeline blasting, marine blasting and highway blasting projects. Blast monitoring, risk

analysis, vibration and noise impact analysis, blasting audits and blast damage complaints investigation for major blasting consultants, insurance companies, law firms, and contractors. Specialties include explosives, explosives demolition, explosion impact, blasting and vibrations. Responsible for business development and project acquisition. Technical responsibility for blast design and review, sequencing, charge placement and blasting on demolition projects, drilling and blasting operations, blast design, vibration control and wall control, seismic monitoring and blasting safety advice, blast consulting services, impact analysis, pre-blast surveys, impact attenuation design and vibration impact prediction to a variety of industry sectors. Extensive project experience with mining and exploration companies, highway construction, and site preparation for private industry.

Other Professional Experience 1986 to 2003:

- *Golder Associates Limited*, Senior Blasting Engineer
- *Explotech Engineering Ltd.,* General Manager
- *Explotech Engineering Ltd.,* Project Engineer
- *B.H.M Consultants Limited*, Field Engineer
- *Kidd Creek Mines Limited,* Engineer in Training
- *Centre in Mining and Mineral Exploration Research,* Researcher

Selected Project Experience

Key Demolition Projects:

- Client – Delsan-A.I.M./Rakowski Cartage & Wrecking Limited – Demolition of supper stacks at Nanticoke OPG GS plant, Nanticoke, Ontario. Site blasting engineer and blaster-in-charge responsible for design, implementation and supervision of the demolition by blasting, February 28, 2018.
- Client – Rakowski Cartage & Wrecking Limited – Demolition of Robertson Headframe Building, Yellowknife, Northwest Territories. Site blasting engineer responsible for design, implementation and supervision of the demolition by blasting, October 29, 2016.
- Client – Cambrian Blasting Co. Ltd. – Demolition CP Rail Transcona Smokestack, Winnipeg, Manitoba. Site blasting engineer responsible for design, implementation and supervision of the demolition by blasting, October 23, 2016.
- Client – Rakowski Cartage & Wrecking Limited – Demolition of Traffic Bridge, Saskatoon, Saskatchewan. Site blasting engineer and blaster-in-charge responsible for design, implementation and supervision of the demolition by blasting, January 10, 2016.
- Client – Rakowski Cartage & Wrecking Limited – Demolition of P&H Grain Elevator, Saskatoon, Saskatchewan. Site blasting engineer and blaster-in-charge responsible for design, implementation and supervision of the demolition by blasting, June 24, 2015.

- Client – Quantum Murray LP – Demolition of PCS Potash Cassidy Lake Dry-mill & Load-out Buildings in New Brunswick by blasting. Site blasting engineer responsible for the explosive demolition of the structures, April 23, 2015.
- Client – JMX Demolition Contractors - Demolition of the 150' Stack at the North Bay Psychiatric Hospital. Site blasting Engineer in charge of blast design, explosives loading, blasting and vibration monitoring, February 23, 2013.
- Client – Rakowski Cartage & Wrecking Limited - Demolition of St. Jean Baptist Bridge over Red River, St. Jean Baptist, Manitoba. Site blasting engineer responsible for design, implementation, vibration monitoring and pre-blast survey, February 16, 2013.
- Client – Delsan-AIM Demolition Group – Demolition of the 250' Stack at the New Brunswick Power Grand Lake GS. Site blasting Engineer in charge of blast design, explosives loading, blasting, vibration monitoring and pre-construction surveys, April 20, 2012.
- Client – Rakowski Cartage & Wrecking Limited - Demolition of Cargill Grain Elevator, Calgary, Alberta. Site blasting engineer and blaster-in-charge responsible for design, implementation and supervision of the demolition by blasting, October 16, 2011.
- Client – Goldcorp – Paymaster Mine Head Frame demolition by blasting. Responsible for design, sequencing preparation, charge placement and blasting. Timmins, Ontario, May 27, 2011.
- Client – Goldcorp – Old Hollinger Mine Head Frame demolition by blasting. Responsible for design, sequencing preparation, charge placement and blasting. Timmins, Ontario, February 20, 2011.
- Client – Rakowski Cartage & Wrecking Limited - Demolition of North Main Head Frame, Hudson Bay Mining & Smelting Company, Flin Flon, Manitoba. Site blasting engineer responsible for design, implementation and supervision of the demolition by blasting, December 5, 2010.
- Client – Goldcorp – Broulan Head Frame demolition by blasting. Responsible for design, sequencing preparation, charge placement and blasting. Timmins, Ontario, December 22, 2009.
- Client – Rakowski Cartage & Wrecking Limited – Demolition of South Main Head Frame, Hudson Bay Mining & Smelting Company, Flin Flon, Manitoba. Site blasting engineer responsible for design, implementation and supervision of the demolition by blasting, July 27, 2009.
- Client – Delsan - AIM Demolition and Environmental Services – Xstrata Gaspe Mine Site, Murdochville, Quebec. Responsible for design, sequencing, charge placement and blasting of steel ore bin building, December 9, 2008.
- Client - City of Ottawa – Frank Clair Stadium Demolition by Blasting – Responsible for specification writing, site supervision and blasting safety, July 16, 2008.
- Client – Delsan - AIM Demolition and Environmental Services – Abitibi Stephenville Paper Mill Site, Newfoundland. Responsible for design, sequencing, charge placement and blasting of multiple structures on site, June 3, 2008.
- Client – B. Curry & Sons Limited – Phalen Mine Rotary Crusher Building demolition by blasting, Sydney, Nova Scotia. Responsible for design, sequencing, charge placement and blasting, June 18, 2007.

- Client – Rakowski Cartage & Wrecking Limited – Winnipeg Arena demolition by blasting, Winnipeg, Manitoba. Responsible for design review, sequencing, charge placement and blasting, March 26, 2006.
- Client – Lac des Iles Mines Limited – Old Mill Transfer House Building demolition by blasting, Thunder Bay, Ontario. Responsible for design, sequencing, charge placement and blasting, June 16, 2005.
- Client - Rakowski Cartage & Wrecking Limited – AGPRO Grain Storage Building demolition by blasting, Winnipeg, Manitoba, June 12, 2005.
- Client – Noranda Inc. – Noranda Inc. Gaspe Site, Murdochville, Quebec. A 550-foot Smoke Stack demolition by blasting. Responsible for design, sequencing, charge placement and blasting, October 13, 2003.
- Client - Aim Waste Management Group – London Health Science Centre Incinerator Stack demolition by blasting, London, Ontario. Responsible for design, sequencing, charge placement and blasting, May 10, 2003.
- Client - Denison Environmental Services –Inco's Shebandowan # 2 Shaft Head-frame demolition by blasting, Shebandowan, Ontario. Responsible for design, sequencing, charge placement and blasting, August 18, 2001.
- Client - Cambrian Blasting Limited – Lafarge Twin-Stack demolition by blasting, Winnipeg, Manitoba. Responsible for design, sequencing, charge placement and blasting, June 10, 2001.
- Client - Rakowski Cartage & Wrecking Limited - Canada Packers Building demolition by blasting, Winnipeg Manitoba. Responsible for design, sequencing, charge placement and blasting, March 4, 2001.
- Client - Rakowski Cartage & Wrecking Limited – Centragas Steel Propane Storage Tank demolition by blasting, Winnipeg Manitoba. Responsible for design review, sequencing, charge placement and blasting, October 22, 2000.
- Client - Maceron Limited – Inco's Little Stobie Mine, Reinforced Concrete Head Frame demolition by blasting, Sudbury, Ontario. Responsible for design, loading, sequencing and blasting, December 1999.
- Client - Techplode Limited – Robie Street Water Reservoir Dome demolition by blasting, Halifax, Nova Scotia. Responsible for design review, approval, loading, sequencing and blasting, October 1999.
- Client - A & E Enterprises – Demolition of the Proctor & Gamble Building by means of blasting, Hamilton, Ontario. Designated site blasting engineer and consultant, responsible for the blast design review, approvals, and site supervision, October 1999.
- Client - LebRun Northern Contracting Limited – Ontario Hydro's 110 m Smoke Stack demolition by blasting, Mission Island, Thunder Bay, Ontario. Responsible for blast design review, pre-blast survey, seismic monitoring, impact attenuation design and vibration impact prediction, September 1998.
- Client - Stanley Buildings and Alberta Public Works Commission – Bow Valley Centre (Calgary General Hospital) demolition by blasting, Calgary Alberta. Responsible for blast design review, blast impact analysis, safety review and seismic monitoring, October 1998.

- Client - Abitibi Consolidated, Fort William Division – Triple Tower Acid Silo demolition by blasting, Thunder Bay, Ontario. Responsible for blast design, explosives loading, blasting sequence, seismic monitoring and blasting safety, December 1998.
- Client - Corona Inc. – Denison Mine Pebble Bin and Ore Silo demolition by blasting, Elliot Lake, Ontario. Responsible for blast design, explosives loading, blasting sequence, seismic monitoring and blasting safety, September 1995.
- Client - Matthews Group – Portage Dam demolition by blasting, Dokis, Ontario. Responsible for blast design, explosives loading, blasting sequence, seismic monitoring and blasting safety, November 1992.
- Client - Various Contractors – St. Lawrence Seaway (Welland Canal) demolition by blasting, St. Catharines, Ontario. Site blasting engineer in charge of blast design implementation, explosives loading, blasting sequence, seismic monitoring and blasting safety, January 1990, 1991, 1992/

KEY CIVIL PROJECTS

- Client – Various Quarry Operators – Blast Impact Analysis and Assessment, various quarries in Ontario, 1999 to present.
- Client – Various Contractors – MTO 400 Series Highway Constructions – Consulting on rock blasting and rock-face stability, various MTO contracts along old Hwy 69, 17, and 11, 2002 to present.
- Client – Kiewit-Alarie, A Partnership (KAP) – Blast Consulting Services at the Hound Chute and Sandy Falls Hydro Electric Project – September 2008.
- Client – Consbec Inc., Leo Alarie and Sons Limited, SNC Lavalin – Blast Consulting Services at the Ear Falls OPG new hydro dam construction, 2004.
- Client – Consbec Inc. – Blast Consulting Services at the Wuskwatim GS, Manitoba Hydro, Thompson, Manitoba, June – November, 2008.
- Client - Union Gas – Installation of Lateral and Distribution Gas Lines, various locations in Ontario. Blasting consultant responsible for blast design review, approvals, pre-blast surveys, vibration monitoring and blasting safety, 1997 – present.
- Client – Laurentian University and Dennis Consultants – Site preparation blasting for Laurentian Health Science Centre. Responsible for preparing blasting specifications, blast vibration monitoring audit and site risk assessment on several contracts. 2003 – 2005.
- Client - Castonguay Blasting Limited - Proposed Highway 400 Four Lane Project, various MTO contracts. Blast consulting engineer responsible for risk analysis, blast design approvals, vibration monitoring, and pre-blast survey requirements. 2003- 2010.
- Client - Belanger Construction Limited – Laurentian Hospital Expansion Project. Blast consulting engineer responsible for blast design, vibration monitoring and site supervision during rock excavation phase of the project. 1999 – 2007.
- Client - Interpaving Limited – Dynamic Earth Project in Sudbury Ontario. Responsible for blast design, vibration control and wall control. Summer 2001.
- Client - Home Depot – Responsible for the drilling and blasting operations for site preparation of the Home Depot building in Sudbury, Ontario, August – November, 2000.

- Client - Castonguay Blasting Limited – Proposed Highway 400 Four Lane Project, Parry Sound, Ontario. Blast consulting engineer responsible for risk analysis of drilling and blasting operations, November 2000 – 2002.
- Client - Dyna-Con Explosive Technologies – Proposed Highway 400 Four Lane Project, Parry Sound, Ontario. Blast consulting engineer responsible for all aspects of drilling and blasting operations, November 1999 – 2003.
- Client - TransCanada PipeLines Limited (TCPL) – High Pressure Gas Line Installation, along TCPL's right-of-way, in Ontario and Manitoba. Associate consulting engineer responsible for blast design review, approvals, blasting safety, vibration monitoring and public relations, 1990 – 1999.
- Client - Lindsey Morden Limited and representing MTO – Traffic Vibration Impact Analysis, Northern Ontario. Analysis of vibrations induced by vehicular traffic on residential buildings, 1997.
- Client - Peter Kiewit Sons Company Limited – Ontario Hydro's Matabitchuan Power Station Rehabilitation Project, North Cobalt, Ontario. Consulting engineer responsible for, blast design review, approvals, pre-blast survey, vibration monitoring and blast supervision, September 1995.
- Client - John Bianchi Limited – South Falls Power Generating Station, Heron Bay, Ontario. Consulting engineer responsible for, blast design review, approvals, pre-blast survey, vibration monitoring and blast supervision, October 1995.
- Client - Arcam Engineering – E.B.Eddy Power Plant Installation, Espanola, Ontario. Consulting engineer responsible for, blast design review, approvals, pre-blast survey, vibration monitoring and blast supervision, 1993.
- Client - Bruce Evans Limited – Ontario Hydro's Big Chute Hydroelectric Generating Station, Port Severn, Ontario. Consulting engineer responsible for, blast design review, approvals, pre-blast survey, vibration monitoring, and blast supervision, May – December 1992.
- Client - International Pipeline Engineering Limited (IPEL) – Bell Canada Fiber Optics Transmission Project, along Trans-Canada Highway, Ontario. Site blasting engineer responsible for implementation of blast design, blasting safety, vibration monitoring and explosives loading, 1987 – 1989.
- Client - Matthews Group – Sturgeon Falls Water Treatment Plant, Sturgeon Falls, Ontario. Site blasting engineer responsible for blast design, excavation sequence, supervision of explosives loading, pre-blast survey, vibration monitoring and blasting safety, May 1985.

KEY MARINE PROJECTS

- Client - TransCanada PipeLines Limited – Lake and River Crossings, various locations in Ontario and Manitoba. Associate consulting engineer responsible for blast design review, approvals, blasting safety, underwater blast over-pressure and vibration monitoring and public relations, 1990 – 1999.
- Client - Ontario Hydro – Dear Lake Powerhouse Project, Dear Lake, Ontario. Blast consulting engineer responsible for determination of explosive quantities used in marine blasting operation, March 1998.

- Client - Ontario Trap Rock Limited – Shipping Dock Construction, Bruce Mines, Ontario. Blast consulting engineer responsible for blast design, ice blasting, explosives loading, underwater blast over-pressure and seismic monitoring, blasting safety and blast data logging, 1995.
- Client - Peter Kiewit and Sons Company Limited – Little Chute Channel Expansion Project, Port Severn, Ontario. Blast consulting engineer responsible for blast design, blast design implementation, application of sequential blasting techniques, underwater blast over-pressure and seismic monitoring, blasting safety and blast data logging, 1993.
- Client - Hugh Cole Limited – Port Colborne Bridge Pier Blasting, Port Colborne, Ontario. Site engineer responsible for blast design, explosive selection and loading, blast supervision, underwater blast over-pressure and seismic monitoring, blasting safety and blast data logging, September 1992.
- Client - Peter Kiewit and Sons Company Limited – Lemieux Island Development Project, Ottawa, Ontario. Site blasting engineer responsible for implementation of blast design, explosives loading, sequential sequencing, vibration monitoring, blast tie-up, and execution, October 1990.

KEY MINING PROJECTS

- Client – Vale Canada Limited – Blast consulting services provided on a special project for the development of a service tunnel under the Garson Mine Shaft Bottom, August, 2011 to present.
- Client – BH Martin Consultants Limited – Blast impact analysis and risk Assessment for proposed reopening of gold mines in the Timmins area mining properties, 2007.
- Client – Superior Aggregate Company – Blast Impact Analysis and Risk Assessment, 2003 to 2008.
- Client – Inco Limited – Underground VRM Blasting Audits and Special Projects, 2003 – 2007.
- Client - Goldcorp Incorporated – Red Lake Mining Division, Balmertown, Ontario. Blast consulting specialist responsible for drilling and blasting operations for crown pillar remediation projects, September 2003.
- Client – Vale Canada (Inco Limited) – Blast Vibration Monitoring Program, Ontario Division, Sudbury, Ontario. Blast consulting engineer responsible for implementation of third-party blast induced vibration-monitoring program, 1990 to present.
- Client - Goldcorp Incorporated – Red Lake Grinding Complex construction, Balmertown, Ontario. Blast consulting engineer responsible for drilling and blasting operations for expansion and installation of new grinding complex, 1999.
- Client - Rainbow Concrete Industries Limited – Hick's Quarry, Sudbury Division, Sudbury, Ontario. Blast consulting engineer responsible for all aspects of drilling and blasting operations, 1996 – 2003.
- Client - Rainbow Concrete Industries Limited – Sudbury, Ontario. Blast consulting engineer responsible for all aspects of drilling and blasting operations in their quarries, 1990 - 2011.
- Client - Placer Dome Limited – Timmins Super Pit Development, South Porcupine, Ontario. Consulting engineers responsible for establishing vibration attenuation curves, recommending blast parameters affecting mining operations, seismic monitoring and blast impact analysis, January 1994.

- Client - Monenco – Sudbury Neutrino Observatory (SNO) Project, Creighton Mine, Sudbury, Ontario. Consulting engineer responsible for blasting operations required for the SNO cavity development, 1993 – 1994.
- Client - Inco Limited – Pillar Recovery at Sudbury Area Mines, Sudbury, Ontario. Instrumental in design, introduction and implementation of combined electric/non-electric sequential blasting techniques in underground Vertical Retreat Mining (VRM) stopes, 1989 – 1995
- Client - Inco Limited – Long Hole Blind Slot Raise Development, Sudbury Area Mines, Sudbury, Ontario. Responsible for design and introduction of blind inverted raises. Development of raises 18 meters long with production holes in the same blast was achieved. This technique is now being widely implemented as a mining method, 1989 - 1990
- Client - Inco Limited – Inco Garson Ore/waste Segregation Project, Garson, Ontario. Responsible for introduction of sequential blasting techniques at the open pit mine. Segregation of ore from waste was achieved within the blasting operations, 1988 – 1989.

RESEARCH AND DEVELOPMENT

- Evaluation of methods to control flyrock in quarry and open pit mining operations.
- Evaluation of prototype electronic detonators in underground mining applications. Analyses of time domain and frequency domain vibrations induced by blasting using electronic detonators. Research conducted at Inco's Sudbury area mines.
- Timing evaluation of prototype non-electric detonators for Ensign-Bickford Limited at several underground mine sites.
- Velocity of Detonation (VOD) measurements of explosive products for quality control purposes in production and controlled test blasting sites, 1999.
- Research in modification of new high-frequency geophones for near-field blast monitoring applications. 1997
- Research in development of high-pressure sensors for determining in-situ rock properties in mining applications, 1996.
- Research on rock fragmentation fatigue using ultra-sonic cyclic loading techniques, 1986 – 1987.

TRAINING AND TEACHING

- Lecturing and training of drillers and blasters for Sudbury area blasting companies, 2003 to present.
- Lecturing and field training for the Surface Blaster Apprenticeship and Licensing Program, Sir Sandford Fleming Collage, Lindsey, Ontario. Training blasters and new candidates on specialized blasting techniques, 1997 – 1999.
- Lecturing and training the TransCanada PipeLine Blasting Inspectors in all aspects of pipeline drilling and blasting operations, 1999.
- Annual lecturing and training the Union Gas Blasting Inspectors in all aspects of drilling and blasting operations, 1999 - 2016.

- Lecturing and training engineers at the Inco Thompson Mine for all aspects of advanced drilling, blasting, vibration monitoring, vibration waveform analysis, and blast diagnostics procedures, 1997.
- Lecturer, post diploma program in ground control, sponsored by the Mining Research Directorate (MRD) at the Ontario Centre for Ground Control Training, Sudbury, Ontario. Provided hands on training in the application of new technology in explosives, rock fragmentation by blasting and controlled blasting techniques to engineers and planner from Northern Ontario mines, 1997.
- Lecturing and field training of candidates for drilling and blasting course sponsored by the Corporation of the Town of Nickel Centre in Sudbury, Ontario, 1994.

PUBLICATIONS

- Bourget, G., Jambakhsh, R.M., “Ontario Hydro T.G.S. Chimney Demolition, Thunder Bay, Ontario, Canada”, Proceedings of the Twenty Sixth Annual Conference on Explosives and Blasting Technique, International Society of Explosive Engineers, Anaheim, California, 2000.
- Jambakhsh, R.M., Copping, C., “Improved Methods of Blasting Concrete for Welland Canal Rehabilitation”, Proceedings of the Twentieth Annual Conference on Explosives and Blasting Technique, International Society of Explosive Engineers, Austin, Texas, 1994.
- Jambakhsh, R.M., Okell, J., “Blast Vibrations and Overpressure Control Using Sequential Blasting Techniques at Inco’s McCreedy West Mine”, Proceedings of the Nineteenth Annual Conference on Explosives and Blasting Technique, International Society of Explosive Engineers, San Diego, California, 1993.
- Jambakhsh, R.M., Cameron, E.A., Richardson, S., “Development of Upper Blind Raises By Long hole Carbide Drilling (LCD) Methods”, Proceedings of the Eighteenth Annual Conference on Explosives and Blasting Technique, International Society of Explosive Engineers, Orlando, Florida, 1992.
- Jambakhsh, R.M., Stephen, G., Muzzeral, B., Hamill, D., “Blast Design and Vibration Analysis in Trench Blasting for Bell Canada’s Fibre Optics Line Project across Ontario”, An Internal Publication, May 1989.

SOUND IMPACT ASSESSMENT

03

NORTH PERIMETER AGGREGATES QUARRY

VOLUNTARY SOUND IMPACT ASSESSMENT and SOUND IMPACT MANAGEMENT PLAN in SATISFACTION of RURAL MUNICIPALITY of ROSSER QUARRY OPERATION BY-LAW NO. 8-15

SUBMITTED TO:

Rural Municipality of Rosser

SUBMITTED BY:

North Perimeter Aggregates Inc.
Broda Properties Inc.

PREPARED BY:

MLi3 Inc.

March 6, 2019

ACKNOWLEDGEMENTS

MLi3 Inc. acknowledges with gratitude the guidance and suggestions received from government representatives who offered input into the development of either the Assessment or the Plan. Further, gratitude is expressed for the guidance and suggestions offered by neighbouring landowners who voluntarily participated in the 2008-2009 Citizens Advisory Committee process to constructively critique (i) Broda's design of the evolving project, and (ii) Tetr*ES* Consultants Inc.'s Environmental Impact Assessment of the then-current project. The contributions of the former Tetr*ES* team that now are part of and support Broda through MLi3 Inc. are acknowledged with particular appreciation. External 3rd-Party review by a former senior official in Manitoba Environment is acknowledged with gratitude. Relevant information prepared by DST Consulting Engineers Inc., WSP Engineering and HCG Engineering is acknowledged with appreciation.

STUDY TEAM

J. Michael McKernan	Environmental Scientist; Principal in Charge
Mike J. Sweet	Environmental Scientist
Richard Bruneau	Researcher; Information Management Specialist
Anna Morrison	Researcher, Document production, and QA

DISCLAIMER

MLi3 Inc. accepts no responsibility for damages of any kind, if any, suffered by any third party as a result of decisions made or actions based on this Impact Assessment and Management Plan ("this report"). All conclusions, views, and opinions expressed in this report are those of MLi3 Inc.

USE OF THIS REPORT:

This report has been prepared for the sole benefit of Broda Properties Inc. ("Broda", or "the Client" or its agent) and may not be used by any third party without the express written consent of MLi3 Inc. and the Client. Any use which a third party makes of this report is the responsibility of such third party.

BASIS OF THE REPORT:

The information, opinions, and/or recommendations made in this report are in accordance with MLi3 Inc.'s present understanding of the Client's site(s) and/or the project(s) and/or actions referenced herein. If the proposed site-specific locations, site uses, actions and/or project(s) differ(s) or is/are modified from what is described in this report, or if the site conditions as described herein are altered, this report is no longer valid unless MLi3 Inc. is requested by the Client to review and revise the report to reflect the differing or modified location, land use and/or project specifics and/or the altered site condition(s).

STANDARD OF CARE:

Preparation of this report, and all associated work, was carried out in accordance with the normally accepted standard of care in Manitoba for the specific professional service provided for the Client. No other warranty is made.

INTERPRETATION OF SITE CONDITIONS:

All site-specific descriptions, and statements regarding their influence on the findings and recommendations made in this report, are based on site conditions encountered by MLi3 Inc. at the time of its site-specific work and at the specific testing and/or sampling locations on the Client's property(s) examined by either Tetr*ES* Consultants Inc. or Stantec Consulting Ltd. by whom the author was employed over the periods, respectively, of 1990-2010 and 2010-2015. Environmental descriptions and other classifications and/or statements of site condition(s) have been made in accordance with normally accepted professional practices which are judgmental in nature; no specific description in this report should be considered exact, but rather to be reflective of the anticipated behaviour of the material or matrix in question. Extrapolation of in situ conditions can be made only to some limited extent beyond the understandings set out herein, being in turn based on specific localized sampling or test points. The extent depends on variability of the soil, rock, groundwater conditions, species composition, habitat types, habitat uses, etc., as influenced by geological processes, time, seasons, planned construction activity, and intended site use(s).

VARYING OR UNEXPECTED CONDITIONS:

Should any site or subsurface condition(s) be encountered in the future, if the proposed land use or project proceeds, that are different from those described in this report or encountered at the test locations referenced herein, MLi3 Inc. must be notified immediately to assess if the varying or unexpected conditions are substantial and if reassessments of the report conclusions or recommendations are required. MLi3 Inc. will not be responsible to any party for damages incurred as a result of that party failing to notify MLi3 that differing site or subsurface condition(s) are present upon becoming aware of such conditions.