

Environmental Assessment Approval

Approval Date: *Original Dated January 9, 2012*

Northumberland Rock Quarry Extension Project Alva Construction Limited, Approval Holder

Antigonish County, Nova Scotia

The Northumberland Rock Quarry Extension Project (the "Undertaking"), proposed by Alva Construction Limited (the "Approval Holder"), Antigonish County, Nova Scotia is approved pursuant to Section 40 of the *Environment Act* and Section 13(1)(b) of the *Environmental Assessment Regulations*. This Approval is subject to the following conditions and obtaining all other necessary approvals, permits or authorizations required by municipal, provincial and federal acts, regulations and by-laws before commencing work on the Undertaking. It is the responsibility of the Approval Holder to ensure that all such approvals, permits or authorizations are obtained before commencing work on the Undertaking.

This Environmental Assessment Approval is based upon the review of the conceptual design, environmental baseline information, impact predictions, and mitigation presented in the Registration Document.

Terms and Conditions for Environmental Assessment Approval

1.0 General Approval

- 1.1 The Environmental Assessment Approval for the project is limited to the project as described in the Registration Document. Any proposal by the Approval Holder for expansion, modification or relocation of any aspect of the project from that proposed in the Registration Document must be submitted to the Environmental Assessment Branch for review and may require an environmental assessment.
- 1.2 The Approval Holder must, within two years of the date of issuance of this approval, commence work on the Undertaking unless granted a written extension by the Minister.
- 1.3 The Approval Holder must not transfer, sell, lease, assign or otherwise dispose of this approval without the written consent of the Minister. The sale of a controlling interest of a business or a transfer of an approval from a parent company to a subsidiary or an affiliate is deemed to be a transfer requiring consent.
- 1.4 The Approval Holder must implement all mitigation and commitments in the Registration Document, unless approved otherwise by Nova Scotia Environment (NSE).

2.0 Surface Water Resources

- 2.1 The Approval Holder must not undertake any quarry related activities within 30 metres of a watercourse unless otherwise approved by NSE. No development or removal of vegetation within this 30 metre buffer is permitted unless otherwise approved by NSE.
- 2.2 All discharges from the site must meet NSE requirements.
- 2.3 The Approval Holder, as part of the application for Part V Approval under the *Environment Act*, must submit to NSE for review and approval:
 - a) a surface water monitoring plan including sampling locations and parameters. Based on the results of the monitoring programs as proposed, the Approval Holder must make necessary modifications to mitigation plans and/or operations as required by NSE;
 - b) plans for erosion and sediment control;
 - c) a stormwater management plan including details regarding the plans for monitoring, maintenance and upgrading of the flow retention/siltation treatment areas. Design criteria must recognize increased likelihood of more intense precipitation events in coming decades; and
 - d) a monitoring program to determine the potential for and extent of sulphide bearing material and plan to manage any exposed acid generating material and associated drainage (in consultation with NSE).
- 2.4 All surface water protection and management programs must be updated /revised to reflect the progressive development of the quarry. This is to take place over the lifetime of the Undertaking, at a schedule acceptable to NSE, and revised as approved by NSE.

3.0 Wetlands

- 3.1 The Approval Holder must not undertake quarry activities within 50 metres of Wetlands 3, 4, and 5, unless otherwise approved by NSE. The Approval Holder must not undertake any quarry related activities within 30 metres of any other wetland unless otherwise approved by NSE. No development or removal of vegetation within this buffer is permitted unless otherwise approved by NSE.
- 3.2 If avoidance of wetlands is not possible during the development of the Project, any proposed loss of wetland habitat through direct infilling, excavating or indirectly through alteration of wetland hydrology will require a Wetland Alteration Approval under NSE's Activities Designation Regulations.
- 3.3 The Approval Holder, as part of the application for Part V Approval under the *Environment Act*, must submit to NSE for review and approval:
 - a) a wetland protection and conservation plan to be developed in consultation with NSDNR and NSE;
 - b) plans, including locations, for flow retention structures and energy

dissipation controls; and

c) a plan for monitoring potential impacts of the Undertaking on wetlands.

4.0 Groundwater Resources

- 4.1 The Approval Holder, as part of the application for Part V Approval under the *Environment Act*, must submit to NSE for review and approval, a groundwater monitoring plan including location of monitoring wells and monitoring parameters. This program must be designed to evaluate potential impacts to both groundwater levels and groundwater quality. Based on the results of the monitoring programs, the Approval Holder must make necessary modifications to mitigation plans and/or quarry operations, if required, to prevent unacceptable environmental effects, to the satisfaction of NSE. This program shall be updated at a frequency as determined by NSE
- 4.2 As per the requirements of the Pit and Quarry Guidelines (as amended) a pre-blast survey must be conducted for all structures (including water wells) within 800 m of the point of blast. The survey should be conducted in accordance with NSE's "Procedure for Conducting a Pre-Blast Survey".
- 4.3 The Approval Holder must not excavate below the watertable, unless otherwise approved by NSE
- 4.4 The Approval Holder must replace, at their expense, any water supply which has been lost or damaged as a result of quarrying operations to the satisfaction of NSE.

5.0 Flora and Fauna

- 5.1 Clearing vegetation must be conducted outside of the breeding season for most bird species (May 1 to August 31), unless otherwise approved by NSE.
- 5.2 The Approval Holder must develop and implement a moose monitoring program, in consultation with NSDNR.
- 5.4 The Approval Holder must implement a plan to manage invasive plants during the Undertaking's operation and reclamation, to the satisfaction of NSDNR, Wildlife Division.

6.0 Dust, Noise and Vibration

- 6.1 The Approval Holder, as part of the application for Part V Approval under the *Environment Act*, must submit to NSE for review and approval:
 - a) an updated blasting plan. The plan must include an updated pre blast survey for structures and water supplies within 800 metres of the blast area, a detailed blast monitoring plan, and a full blast damage response policy as required by NSE. The plan must demonstrate that air concussion and ground vibration limits are capable of being met.
 - b) results of air dispersion modeling for the anticipated contaminants from the project, determined in consultation with NSE.

- 6.2 The Approval Holder must provide a sound monitoring program at the request of NSE. If required, based on the results of the monitoring programs, the Approval Holder must make necessary modifications to mitigation plans and/or quarry operations to prevent continued unacceptable environmental effects to the satisfaction of NSE.
- 6.3 The Approval Holder must implement an air monitoring program (particulate emissions), at the request of NSE. If required, based on the results of the monitoring programs, the Approval Holder must make necessary modifications to mitigation plans and/or quarry operations to prevent continued unacceptable environmental effects to the satisfaction of NSE.

7.0 Archaeological and Heritage Resources

- 7.1 The Approval Holder must provide Nova Scotia Communities, Culture & Heritage details of the archaeological work conducted, including field reconnaissance report, for the proposed quarry expansion (including applicable permits obtained).
- 7.2 The Approval Holder must cease work and contact the Director, Heritage Division, Nova Scotia Department of Communities, Culture and Heritage immediately upon discovery of an archaeological site or artifact unearthed during any phase of the proposed Undertaking. If the find is of certain or suspected Mi'kmaq origin, the Approval Holder must also contact the Executive Director of the Kwilmu'kw Maw-klusuaqn Negotiation Office.

8.0 Public Engagement

- 8.1 In accordance with the Pit and Quarry Guidelines (as amended), the Approval Holder may not blast within 800m of the foundation or base of a structure located off site unless written consent is obtained from those individuals owning structures within 800m.
- 8.2 The Approval Holder must appoint a contact person designated to deal with environmental concerns and complaints from the public, and must provide the contact person information to NSE 30 days prior to the commencement of any work. Complaints and associated actions must be recorded and made available to NSE upon request.
- 8.3 The Approval Holder must establish and operate a Community Liaison Committee (CLC). The NSE Guidelines for the Formation of a Community Liaison Committee should be used for guidance. The Approval Holder must operate the CLC for the duration of the undertaking and until released in writing by NSE.
- 8.4 The Approval Holder must solicit CLC membership from the Municipality of the County of Antigonish, the Mi'kmaq community and the general public.
- 8.5 The Project CLC must be established prior to any expansion.

9.0 First Nation and Aboriginal Engagement

- 9.1 A Mi'kmaq Ecological Study (MEKS) must be completed prior to developing lands outside of the quarry area approved under Approval No. 2010-075166-R01.

10.0 Transportation

- 10.1 The Approval Holder must develop and implement a Traffic Management Plan (to the satisfaction of NSE), in consultation with the CLC and the Municipality of the County of Antigonish.

11.0 Quarry Development and Reclamation

- 11.1 The Approval Holder shall operate the quarry in a manner such that the active area does not exceed ten hectares (10 ha) at any time, unless otherwise approved by NSE.
- 11.2 The Approval Holder, as part of the application for Part V Approval, and subsequent renewals, under the *Environment Act*, must submit a quarry management plan to NSE for review and approval. The plan shall include, but not be limited to:
- a) a quarry development plan based on 10 year intervals;
 - b) an environmental management plan; and
 - c) a progressive reclamation plan including the progress and evaluation of reclamation activities completed to date.
- 11.3 The quarry management plan must be updated/revised to reflect the progressive development of the quarry. This is to take place over the lifetime of the Undertaking, at a schedule acceptable to NSE, and revised as approved by NSE.
- 11.4 The Approval Holder, as part of the application for Part V Approval under the *Environment Act*, must submit to NSE for review and approval a contingency plan that meets NSE's Contingency Planning Guidelines and addresses (including but not limited to):
- a) accidental occurrences, and includes the location of spill equipment kept on-site and emergency phone numbers;
 - b) training to be delivered to staff, including contractors;
 - c) procedures for responding to incidents occurring during times when the facility is not staffed (e.g. evenings, weekends, holidays);
 - d) impacts to watercourses and water resources and domestic water supplies;
 - e) releases of dangerous goods or waste dangerous goods;

f) potential fire at the facility (to be reviewed and approved by the local fire and emergency service providers);

g) petroleum and hazardous material spills and surface water control structure failure; and

h) such other information as required by NSE.

- 11.5 Contingency plans must be updated/revised to reflect the progressive development of the quarry. This is to take place over the lifetime of the Undertaking, at a schedule acceptable to NSE, and revised as approved by NSE.
- 11.6 Hazardous materials or petroleum products that are to be stored on the site must be stored in a manner that is approved by NSE.
- 11.7 Refuelling must not be conducted within 100 metres of any surface water resource, unless otherwise approved by NSE.
- 11.8 The Approval Holder must submit a progressive reclamation plan to NSE for review and approval. Revegetation will be limited to the use of native species unless otherwise approved by NSE.

Original Signed By

Sterling Belliveau
Minister of Environment