



Agence canadienne
d'évaluation environnementale

Canadian Environmental
Assessment Agency

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DATE: February 5, 2003

PAGES : 20

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MESSAGE:

Attached please find the draft project description for a proposed quarry and marine terminal at Whites Point, Digby Neck, Nova Scotia.

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*Environmental assessment ...
Before you decide*



*L'évaluation environnementale d'abord ...
la décision ensuite*

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MEMORANDUM / NOTE DE SERVICE

TO/DEST: Distribution List

FROM/ORIG: Derek McDonald

DATE: February 5, 2003

SUBJECT/OBJET: Proposed Quarry and Marine Terminal at Whites Point, Digby Neck, Nova Scotia

Please find attached a Draft Project Description for a proposed quarry and marine terminal at Whites Point, Digby Neck, Nova Scotia. At a meeting on January 6, 2003 which some of you attended, the proponent was advised to provide this document for review prior to formally initiating the Federal Coordination process.

Please review the attached project description to determine, from your agency's perspective, whether or not it is adequate for Federal Coordination purposes. If not, please indicate what additional information you need. If your agency will not be involved in this project as either an RA or expert FA, please let me know and I will remove you from the distribution list for the Federal Coordination Request and subsequent correspondence.

I would like to hear from you by Friday, February 14th. Please contact me if you have any questions (902.426.9458 / derek.mcdonald@ceaa-acee.gc.ca).

DM

Enc.

c.c. Helen MacPhail, Nova Scotia Department of Environment & Labour
Bill Coulter, CEAA

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**CEAA / ACEE
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FEB 03 2003

ATLANTIC REGION

2003-081

DRAFT

PROJECT DESCRIPTION

WHITES POINT QUARRY & MARINE TERMINAL

DIGBY COUNTY, NOVA SCOTIA

submitted by

Global Quarry Products

January 2003

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Global Quarry Products

January 28, 2003

Derek McDonald
Canadian Environment Assessment Agency
1801 Hollis Street, Suite 200
Halifax Nova Scotia
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Re: White's Point Quarry & Marine Terminal – Draft Project Description

In accordance with your Operational Policy Statement OPS – EPO/5 – 2000, we are submitting a Draft Project Description for the reference project.

If you have any questions, please call.

Yours truly

Paul Buxton
Project Manager

Cf. Christopher A. Daly
Nova Scotia Environmental Assessment Branch

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Whites Point Quarry & Marine Terminal

1. General Information

General

The project is a proposed basalt quarry with a marine terminal located on Digby Neck in Digby County, Nova Scotia. The name of the project is the Whites Point Quarry and is located as shown on Maps 1, 2, and 3.

This project description has been distributed to the Nova Scotia Department of Environment and Labour, Environmental Assessment Branch.

Consultations have been ongoing with representatives of the Nova Scotia Department of Environment and Labour including an initial meeting on June 14, 2002. A meeting with representatives of Fisheries and Oceans Canada – Habitat Management Division and Navigable Waters Protection was held on July 25, 2002. A meeting with various federal representatives including the Canadian Environmental Assessment Agency, Environment Canada, Navigable Waters Protection, Fisheries and Oceans Canada, and the Nova Scotia Department of Environment and Labour was held on January 6, 2003. A presentation to the Digby Municipal Council, the formation of a Community Liaison Committee, and preparation of a newsletter for distribution to households in the local area has been accomplished to date. Contacts with aboriginal groups are pending.

An environmental assessment is presently underway to be included with the "registration of undertaking" for the Nova Scotia Department of Environment and Labour.

Contacts

The name of the proponent is Global Quarry Products. No federal government departments or agencies are involved with the project as co-proponents. The contact person for Global Quarry Products is:

Paul G. Buxton, P. Eng.
P.O. Box 98
Annapolis Royal, Nova Scotia B0S 1A0

Phone (902) 638-8108

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Federal Involvement

No federal government department or agency is providing financial support to the White's Point Quarry and marine terminal project. The land to be used for the project is in private ownership and no federal land is involved with the project, with the exception of the required water lot to the marine terminal.

Authorizations Required

A federal permit under the Navigable Waters Protection Act will be required for the Marine Terminal. No storage or manufacture of hazardous materials is proposed on-site. Permits from the Nova Scotia Department of Environment and Labour will be required. Municipal zoning is presently not in place for Digby County.

2. Project Information

Project Components / Structures

The main components of the project include the physical plant for construction aggregate processing and a marine terminal for ship loading of the aggregate.

Land based permanent structures would include rock crushers, screens, closed circuit wash facilities, conveyors, load out tunnel, support structures (shop, office, fuel tanks) and environmental control structures.

Marine facilities would include a conveyor, ship loader, berthing dolphins and mooring buoys.

Associated construction processes would include erection of on land aggregate processing equipment, conveyors and wash water pumping systems.

Environmental control processes would include drainage channels, sediment retention ponds and land restoration. *methods?*

Construction processes for the marine terminal infrastructure would include the anchoring of pile support structures to the basalt rock extending off shore and the construction of concrete caps as dolphins. *How far?*

Conceptual layouts of the land and water based infrastructure is shown on Figure 1.

Conceptual plan and elevation of the marine terminal is shown on Drawing 1 and 2.

Concrete and steel fabrication would be typical construction materials used.

*Potential impacts
air & water*

Blasting?

Pile driving

Quarry equipment would include heavy mobile gear such as loaders, trucks, bulldozers, excavators, etc. and permanent rock processing equipment such as crushers, screens and conveyor systems.

and the quality

The quarry property comprises approximately 380 acres. Land based infrastructure would occupy approximately 27 acres while marine based infrastructure would occupy approximately 10 acres. Quarrying could potentially take place on 300 acres. Quarry production would be approximately 2 million tons of processed aggregate per year. Approximately 10 acres of new quarry would be opened each year with restoration of previously quarried areas every five years.

The life of the quarry is projected to be 50 years.

Decommissioning - methods

Project Activities

Land based and marine based construction is expected to take one year and take place simultaneously. Quarry operation is expected to extend over 50 years and decommissioning to take one year. Site restoration will be continuous throughout the 50-year life of the project.

Methods

The land based quarry operations are expected to be year round with aggregate stockpiled for ship loading once per week. Approximately 40,000 tons of aggregate would be produced for loading each week. Ship loading is expected to take 10 hours into ships similar to the CSL Spirit with a length of approximately 625 feet.

The conceptual plan of the land based and water based infrastructure is shown on Figure 1.

Conceptual engineering for the marine terminal is shown on Drawing 1 and 2.

As indicated on Figure 1, a 20- meter high working quarry face is envisioned.

A section of the final land configuration is shown on Figure 2.

The drainage channels and sediment retention pond structures shown on Figure 1 are typical of the environmental controls to be employed for subsequent phases of quarrying over the life of the project.

No requirements for off-site land or water use are proposed at this time.

Resource / Material Requirements

Drilling and blasting of basalt rock, loading, hauling, crushing, screening, washing and stockpiling of rock aggregate will be done on-site.

No on-site storage of explosive material is proposed.

Blasting Plans

Stockpiled aggregate materials will be transported by conveyor systems to the ship loader and loaded into the holds of the vessel.

Raw materials for project operations would include electrical energy, fuel and water.

Storage refueling

All water requirements would be derived from on-site sources and primarily from recycled surface water.

Fuel, primarily diesel, would be stored on-site in above ground, double walled tanks with safety alarm systems.

Nova Scotia Power Corporation would be the provider of electrical power.

Access to the quarry site is via White's Cove Road, an unimproved public road, from Highway 217 to the property.

No pipelines to the site are proposed.

As mentioned previously, on-site excavation will involve approximately 2 million tons of basalt rock per year, which will then be transported by water to markets. The quantity of "fill" removed over the life of the project could reach 100 million tons.

Explosives will be used during quarry operations with blasting approximately once every two weeks when the quarry is in full production.

Processed aggregates will be washed before shipment using a closed wash water circuit.

Waste Disposal

No solid, liquid or gaseous wastes except emissions from fuel consumption are expected from quarry operations.

All fuel consuming machinery will meet the latest emission control standards.

No toxic / hazardous materials will remain and require disposal.

Explosives will be consumed during blasting, however, all surface water run-off from the site will be monitored for any possible residual products from the blasting.

3. Project Site Information

Project Location

The location of the project is shown on the property Map 1.

PID number of the property is 30161160.

The location of the project is 44 degrees 27' 47" N, 66 degrees 08' 31" E as shown on Map 2.

A topographic Map 3 and aerial photo of the property are included.

The site layout of the main quarry components including quarry infrastructure and marine terminal is shown on Figure 1.

Environmental Features

The White's Point Quarry site is composed of the Jurassic North Mountain Basalt. These basalts are typical of the on-shore geology and continue seaward into the Bay of Fundy. North Mountain Basalt is present along the Bay of Fundy from Brier Island to Cape Blomidon, a distance of over 200 km. The North Mountain Basalt is a ground-water aquifer in the Digby Neck area. The Quaternary age glacial deposit overburden along Digby Neck is mapped as the Basalt Till Facies of the Beaver River Till Unit. This till is generally thin and mantled over the bedrock and may overlie older till deposits in some areas. Rossway soils cover the entire quarry site and are generally stony and well drained. In Digby County, these soils are chiefly forested.

The exiting topography of the proposed quarry site is steeply sloping toward the Bay of Fundy. Relief at the highest point is over 90 meters. Extreme gradients range up to 50% slope with more common slopes in the range of 10 % to 20 %. Several areas such as those along the shoreline, the abandoned pit and the southeast ridge of the site are relatively flat.

Surface water runoff from the majority of the site flows toward the Bay of Fundy except for an approximate 10- hectare area at the southeast corner which drains toward Saint Mary's Bay.

Ground water flows generally follow the same pattern as surface waters.

Several small, intermittent, irregularly defined watercourses, typical of the North Mountain are evident flowing down the mountainside and dispersing into the Bay.

Forest and the habitats they provide are typical of the area and of coastal forests of the North Mountain Basalt Ridge Natural Landscape extending from Cape Blomidon to Brier Island. The property is almost entirely forested, dominated by coniferous species, with the exception of two coastal barrens south of White's Cove and a seasonal bog north of the Cove.

A significant proportion of the coniferous species, (particularly white spruce), is diseased, dead or dying. Approximately sixty acres of forest on the site was recently clear-cut, primarily on top of the ridge along the east property line. Infestation of spruce, primarily

white spruce, by the spruce bark beetle has prompted clear cutting of significant acreage of softwood on near by areas of Digby Neck..

Wildlife consists of common bird species and animals such as deer, coyote, mink, rabbits, etc. No faunal species at risk are expected to inhabit the upland areas of the property. No wetland or other sensitive wildlife habitats are known to exist on the property.

A few intermittent watercourses flow down the mountainside into the Bay of Fundy . Also, a coastal bog exists where one of the watercourses enters the Bay. These watercourses, due to their intermittent flow are not suitable or are marginal as fish habitat.

The intertidal zone is comprised mainly of bedrock outcrops with a cobble zone at White's Cove. Most of the mid and lower intertidal zone bedrock is covered with a thick mat of rockweed. Periwinkles, blue mussels, hermit crabs, dog welks and green crabs inhabit the areas of the intertidal zone. The bottom composition of the sub-tidal and near-shore waters is primarily bedrock and supports lobster, starfish, sea urchins, sea cucumbers and various fish including herring.

Harbour seals also frequent the near-shore waters as well as Common Eiders, Scoters, Gulls and Double-crested Cormorants.

Whales, porpoises, dolphins and seals frequent the Bay of Fundy .

The construction of the marine terminal is expected to affect intertidal and near-shore fish habitat and navigable waters. The marine environment along the property consists of approximately 1.9 miles of the Bay of Fundy coast and near-shore waters. Development of the marine terminal infrastructure will affect an area of approximately 10 acres of the intertidal and near-shore marine environment. Physical effects on the bottom habitat will be minimal and no net loss of habitat is expected. Typical species of marine fish and mammals were previously mentioned as well as the general habitat character. Construction of the marine terminal will extend approximately 600 feet from the shore and provide berthing depth of 15 meters below chart datum.

Typical photos of the site are attached.

Land Use

Presently the property is partially forested as a result of some recent clear cutting. This type of land use is typical of the surrounding lands as well. Historic land use has included a haul-up / skid-way at White's Cove, fish shacks / camps and an abandoned gravel pit. No significant development exists in the watershed of the property and it is unlikely contamination from present or past land uses would have occurred. Traditional aboriginal use is not apparent on or adjacent to the property. The closest Indian reserve is in Bear River about 60 km away,

No national parks, designated heritage sites, historic canals, sensitive or protected areas are located adjacent to the property.

The property is in the vicinity of the community of Little River and is primarily rural, residential.

The property is within 800 meters of some residential structures.

Use of Waterway

This near-shore portion of the Bay of Fundy is used primarily by lobster, herring and sea cucumber fishers. During the six month lobster fishing season, lobster boats can frequent the near-shore waters on a daily basis. Other fishing vessels, whale watching vessels and bulk container vessels use the offshore waters. No obstructions are known to occur in this area of the Bay. Several local lobster and herring fishers use the near-shore waters. Local onshore harvesting of periwinkles is also done.

No recreational or aboriginal / subsistence fisheries are known to exist in the water area proposed for the marine terminal.