

**BHB Farms**  
**Bishop's Falls**  
**Newfoundland**

**Registration of an Undertaking**  
**Pursuant to the Environmental Protection Act**

**Prepared For:**

**Mr. Bryan Borland**  
**39 Thirteen Mile Crossing**  
**Bishop's Falls, NL**  
**A0H 1C0**

**November 23, 2010**

**NAME OF UNDERTAKING:            BHB FARMS**

**PROPONENT:**

- 1. Name of Corporate Body:            BHB Farms**
  
- 2. Address:                                39 Thirteen Mile Crossing  
Bishop's Falls, NL    A0H 1C0**
  
- 3. Chief Executive Officer:            Mr. Bryan Borland  
39 Thirteen Mile Crossing  
Bishop's Falls, NL    A0H 1C0  
709-258-6797 (phone)  
709-486-5781 (cell)**
  
- 4. Principal Contact:                    Mr. Bryan Borland  
39 Thirteen Mile Crossing  
Bishop's Falls, NL    A0H 1C0  
709-258-6797 (phone)  
709-486-5781 (cell)**

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### **The Undertaking:**

Bryan Borland of Bishop's Falls, Newfoundland and Labrador is planning to develop and operate a cranberry operation on six hundred and seven (607) hectares of peat land now under application from Crown Lands Division of Department of Natural Resources.

### **Description of the Undertaking:**

#### **(1) Geographical location:**

The peat bog under application is located on the Botwood Highway (rte. No. 350) approximately 1000 feet extending to 2500 feet east of Peter's Pond. The peat bog is under application # 136333 dated April 9, 2010. Total bog area is approximately six hundred and seven (607) hectares; map is attached.

#### **(2) Physical Features:**

The site is totally peat bog; no draining or ditching has been done. It is completely surrounded by Crown Land on the north, south, east and west. The development of this bog is for cranberry production.

#### **(3) Construction:**

The site will be designed by an appropriate engineering consultant and in consultation with agricultural staff. Work will be carried out over a two to five (2 – 5) year period, with approximately a four (4) hectare cranberry field developed by 2012 and additional amounts each year thereafter. The actual size of the fields will be determined by engineering advice.

##### **i. Cranberry operations:**

- Cranberry fields developed by removing top layer of vegetation and peat to be used to form berms around the field;

- Sand source from CL Sand & Gravel quarry, less than two kilometers distant;
- Irrigation pond for water storage;
- Sediment pond for holding discharge water;
- Installation of water control structures;
- Installation of drainage tile in cranberry bed;
- Berms around fields developed into roads approximately 1.8 to 2.4 metres wide to service area;
- Approximately twenty (20) cm (6" to 8") of sand to be laid over cranberry bed.

Possible sources of pollution would come from machinery working with cranberry development: diesel fuel and lubricants used in the operation of excavators, farm tractors, dump trucks, etc. Fueling and servicing will not be done on the actual job site but at a specified site off the bog where conditions can be strictly controlled. No fuels or lubricants will be stored on-site. These products will be transported to the site from home-base at Thirteen Mile Crossing, less than four (4) km away. There would appear to be no cause for resource conflicts.

#### **(4) Operations:**

Management and production of cranberry will be ongoing yearly. After preparation of the beds seedlings will be transported and allowed to produce. To harvest, the bed is flooded with approximately 40-45 cm water; berries are dislodged from the plant by a "cranberry beater", gathered by a boom and loaded into containers by a conveyor system for shipment.

Water supply will be drawn from an irrigation pond which will be dug out of the existing peat bog and within the confines of the property boundaries. Typically, these ponds rely on the natural water table that exists, as is the case here. The size and depth of the irrigation pond will depend on the development of the cranberry fields and will increase as

development increases. Water will be drawn from the irrigation pond using a diesel pump. This water is then distributed to an irrigation network of HDPE piping to irrigate or flood the cranberry beds. At this time there is no intent to draw water from any streams.

Typically, irrigation operations allow waste water to free flow through the site. Harvesting requires that one cranberry bed is flooded at a time with subsequent beds flooded using the previously used flood water and top up if necessary. Significant draw down of water occurs during the winter when all fields are flooded to protect plants from frost damage.

With all water usage operations there is a need to discharge excess water. The excess water is discharged through a series of ditching around each of the cranberry beds and control structures at entry and exit locations for each bed. Therefore, the amount of discharge can be managed. The flood water is then drained to the next field through a controlled drainage system for similar harvesting or drained into a sediment pond to be used later as required.

During the construction phase, silt fences will be used to mitigate sediment discharge. The discharged water will be released into a settlement or tail water recovery pond that will be at the low end of the peat bog to allow for gravity flow. The exact location will be determined once a topographical survey is completed. The tail water recovery pond will be outfitted with a spill way structure to mallow for the release of the water in a less damaging way. The layout of the entire cranberry operation depends largely on the topographical survey, which has yet to be conducted.

Agricultural operational procedures will meet appropriate environmental standards for sustainable agriculture.

During the operational period potential contaminants will include chemicals used in the cranberry operation within Newfoundland and Labrador and could include registered products for:

- Herbicides: Devrinol Callisto; Roundup
- Insecticides: Sevein; Diazinon
- Fungicides/Fertilizer: 17-17-17/50lbs./acre; 46-0-0 10lbs/acre

Operational sources of pollution would be much the same as for construction; no fuels or lubricants will be stored on-site. Refueling and servicing will be done at a controlled site off-bog, with supplies transported from home-base on a daily or as-needed basis.

No building will be constructed in the area. Refuse and human waste will be disposed of as per regulations of the department of Environment and Conservation. The intention is to provide an outhouse enclosure complete with portable facilities that can be disposed of into the town of Bishop's Falls sanitary system.

**(5) Occupations:**

**BHB Farms**

<u>Occupation/NOC</u>	<u>Full/Part-time</u>	<u>Length</u>	<u>No. of Personnel</u>
<b>General</b>			
Manager/8251	Fulltime	8 mos.	1
<b>Design</b>			
Engineer/2131	Fulltime	1 wk.	1
<b>Grower/8431</b>	Fulltime	6 mos.	1
<b>Pesticide</b>			
Applicator/8431	Fulltime	2 wks.	1

<b>Labourer/8431</b>	<b>Part-time</b>	<b>6 mos.</b>	<b>3</b>
<b>Excavator Operator/7421</b>	<b>Full-time</b>	<b>6 wks. During Development</b>	<b>1</b>
<b>Electrician/7241</b>	<b>Full-time</b>	<b>1 wk.</b>	<b>1</b>
<b>Mechanic/7312</b>	<b>Full-time</b>	<b>3 wks.</b>	<b>1</b>

**Crown Lands referral # 2017433**

**(6) Project Related Documents:**

**Crown Lands Application # 136333, April 9, 2010.**



# Mapping

**Approval of Undertaking:**

<b><u>Approval / Certification / License / Permit</u></b>	<b><u>Authority</u></b>
<b>Environmental Registration</b>	<b>Department of Environment &amp; Conservation</b>
<b>Environmental Assessment Approval</b>	<b>Department of Environment &amp; Conservation</b>
<b>Crown Land</b>	<b>Department of Environment &amp; Conservation (rec'd.)</b>
<b>Fuel Storage &amp; Handling</b>	<b>Department of Government Services (rec'd.)</b>
<b>Pesticides (applicator/operator)</b>	<b>Department of Environment &amp; Conservation</b>
<b>Water Use &amp; license</b>	<b>Department of Environment &amp; Conservation</b>
<b>Permit to Alter a Body of Water</b>	<b>Department of Environment &amp; Conservation</b>
<b>Workers Health &amp; Safety Compensation</b>	<b>Workplace Health, Safety and Compensation Commission</b>

**Schedule:**

**The earliest construction start date is January, 2011; the latest being April, 2011.**

**Construction will then be conducted over two years.**

**Funding:**

**No application for funding at this time: typical cost of cranberry bed development is approximately \$30,000 - \$35,000 / acre.**

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**Date**

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**Bryan Borland (Owner/Operator)**

**General Manager (NOC Code 8251):**

**Farmers and farm managers perform some or all of the following duties:**

- **Manage the overall operations of a farm, ranch or orchard**
- **Determine the amount and kinds of crops to be grown and livestock to be raised**
- **Plant, cultivate and harvest crops**
- **Raise and breed livestock and poultry**
- **Hire and supervise farm workers**
- **Establish a marketing program**
- **Purchase farm machinery , livestock, seed, feed and other supplies**
- **Maintain farm machinery, equipment and buildings**
- **Develop and keep financial and production records**
- **Farmers and farm managers may manage farms specialized in particular crops such as wheat, apples or potatoes or raise particular livestock such as beef cattle, hogs or chickens**

**Design Engineer – Contractor (NOC Code 2131):**

- **Assuming civil engineer**
- **Plan and design major civil projects such as buildings, roads, bridges, dams, water and waste management systems and structural steel fabrications**
- **Develop construction specifications and procedures**
- **Evaluate and recommend appropriate building and construction materials**
- **Interpret, review and approve survey and civil design work**

- Conduct field services for civil works
- Ensure construction plans meet guidelines and specifications of building codes and other regulations
- Establish and monitor construction work schedules

**Grower (NOC Code 8431):**

General farm workers perform some or all of the following duties:

- Plant, fertilize, cultivate, spray, irrigate and harvest crops
- Feed and tend livestock and poultry
- Operate and maintain farm machinery and equipment
- Detect disease and health problems in crops, livestock and poultry
- Examine produce for quality and prepare for market
- Set and monitor water lines, air flow and temperature in barns, pens and chicken coops
- General farm workers can become specialized in a particular type of crop or livestock production through experience

**Pesticide Applicator (NOC Code 8431 General Farm worker):**

- Plant, fertilize, cultivate, spray, irrigate and harvest crops

**Laborer (NOC Code 8431 General Farm Worker):**

General farm workers perform some or all of the following duties:

- Plant, fertilize, cultivate, spray, irrigate and harvest crops
- Feed and tend livestock and poultry
- Milk cows
- Operate and maintain farm machinery and equipment
- Detect disease and health problems in crops, livestock and poultry
- Examine produce for quality and prepare for market
- Set and monitor water lines, air flow and temperature in barns, pens and chicken coops
- Clean stables, barns, barnyards and pens

- **General farm workers can become specialized in a particular type of crop or livestock production through experience**

**Excavator Operator (NOC Code 7421 Heavy Equipment Operators):**

**Heavy Equipment Operators perform some or all of the following duties:**

- **Operate heavy equipment such as backhoes, bulldozers, loaders and graders to excavate, move, load and grade earth, rock, gravel or other materials during construction and related activities**
- **Operate bulldozers or other heavy equipment to clear brush and stumps prior to logging activities and to build roads at logging and surface mining sites**
- **Operate heavy equipment with pile drivers head to drive piling into earth to provide support for building or other structures**

**Electrician (NOC Code 7241 Electricians):**

**Electricians in this unit group perform some or all of the following duties:**

- **Read and interpret drawings, circuit diagrams and electrical code specifications to determine wiring layouts for new or existing installations**
- **Pull wire through conduits and through holes in walls and floors**
- **Install brackets and hangers to support electrical equipment**
- **Install, replace and repair lighting fixtures and electrical control and distribution equipment, such as switches, relays and circuit breaker panels**
- **Splice, join and connect wire to fixtures and components to form circuits; test continuity of circuits using test equipment to ensure compatibility and safety of system, following installation, replacement or repair**

**Mechanic (NOC Code 7312 Heavy Duty Equipment Mechanics):**

**Farm Equipment Mechanic**

**Heavy-duty equipment mechanics perform some or all of the following duties:**

- **Check bulldozers, cranes, graders and other heavy construction, agricultural, logging and mining equipment for proper performance and inspect equipment to detect faults and malfunctions**
- **Diagnose faults and malfunctions using computerized and other testing equipment to determine extent of repair required**
- **Adjust equipment and repair or replace defective parts, components or systems, using hand and power tools**
- **Test repaired equipment for proper performance and to ensure that work meets manufacturer's specifications**
- **Clean, lubricate and perform other routine maintenance work on equipment**
- **Service attachments and working tools such as harvesting and tillage equipment, blades, ploughs, winches and side booms**
- **May perform repair work on heavy trucks**
- **May attach components and adjust new farm equipment**

# **Proposed Cranberry Farm Layout**

**(Preliminary)**