

**Comfort Cove Cranberry
Comfort Cove
Newfoundland**

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

Prepared for:

Mr. Keith Cooper
Comfort Cove Cranberry
P.O.Box 155
Comfort Cove, NL
A0G 3K0

April 30, 2010

NAME OF UNDERTAKING: COMFORT COVE CRANBERRY
FARM DEVELOPMENT

PROPOSER:

1. Name of Corporate Body: Comfort Cove Cranberry

11. Address: P.O.Box 155
Comfort Cove, NL
A0G 3K0

111. Chief Executive Officer: Mr. Keith Cooper
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The Undertaking:

Keith Cooper of Comfort Cove, Newfoundland and Labrador is planning to develop and operate a cranberry operation on thirty (30) 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 in Comfort Cove/Newstead area approximately forty-four (44) km north of Lewisporte Junction, seven (7) km north from Comfort Cove/Newstead boundary, one (1) km west off route 343, approximately 1-2 km south of Steady Cove Pond. The peat bog is under application # 131978 dated May 5, 2008. Total bog area is approximately thirty (30) hectares maps is attached.

(2) Physical Features:

The site is totally peat bog. No draining or ditching has been done. It is completely surrounded by Crown Lands 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 agriculture staff. Work will be carried out over a period of two to five (2-5) years with approximately a four (4) hectare cranberry field developed by 2011 and additional amounts each year thereafter. The actual size of the fields will be determined by engineering advice.

i. Cranberry Operations:

* cranberry fields will be developed by removing top layer of vegetation and peat to be used to form berms around the field;

- * irrigation pond for storage;
- * sediment pond for holding discharge water;
- * installation of water control structures;
- * installation of drainage tile in cranberry bed;
- * berms around fields will be 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 of 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 our home base at Comfort Cove approximately seven (7) 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 transplanted and allowed to produce. To harvest, the bed is flooded with about 40-45 cm of water, berries are dislodged from the plant by a “cranberry beater”, gathered by a boom and loaded in containers by conveyor system for shipment.

Water supply will be drawn from an irrigation pond that 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 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 previous flood water and top up water 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 as yet to be conducted.

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

During the operational period potential contaminates 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; 17-17-17 / 50 lbs/acre, 46-0-0 / 10 lbs/acre

Operational sources of pollution would be pretty 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 basis or on an “as needed” basis.

No buildings 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 Comfort Cove sanitary system

(5) Occupations:

Comfort Cove Cranberry Farm

Occupation	Full/Part-time	Length	Number of Personnel
<u>General Manager</u>	Full-time	8 months	1
<u>Design Engineer</u>	Full-time	1 week	1
Grower	Full-time	6 months	1
<u>Pesticide Applicator</u>	Full-time	2 weeks	1
Labourer	Part-time	6 months	3
<u>Excavator Operator</u>	Full-time	6 weeks during development	1
Electrician	Full-time	1 week	1
Mechanic	Full-time	3 weeks	1

Crown Lands Referral # 131978

(6) Project Related Documents

Crown Land Application # 131978, May 5, 2008

Mapping

Government of Newfoundland & Labrador Department of Environment & Conservation



NOTE TO USERS

The information on this map was compiled from land surveys registered in the Crown Lands Registry.

Since the Registry does not contain information on all land ownership within the Province, the information depicted cannot be considered complete.

The boundary lines shown are intended to be used as an index to land titles issued by the Crown. The accuracy of the plot is not sufficient for measurement purposes and does not guarantee title.

Users finding any errors or omissions on this map sheet are asked to contact the Crown Titles Mapping Section, Howley Building Higgins Line, St. John's Newfoundland.

Some titles may not be plotted due to Crown Lands volumes missing from the Crown Lands registry or insufficient survey information.

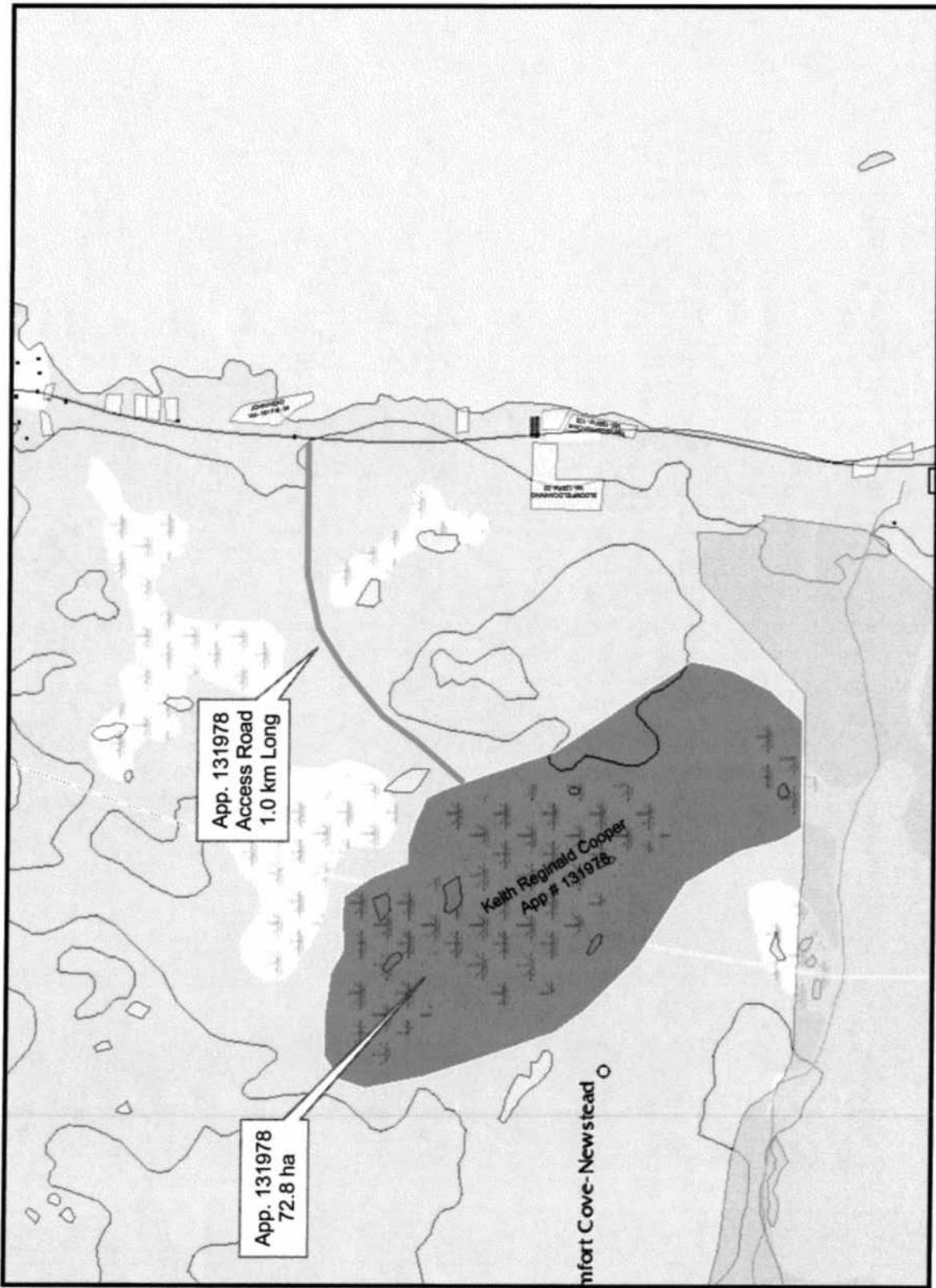
Users can also contact the Crown Titles Mapping Section by fax or telephone as listed below.

Fax - 729-3221
Telephone - 729-0061

Crown Lands Division

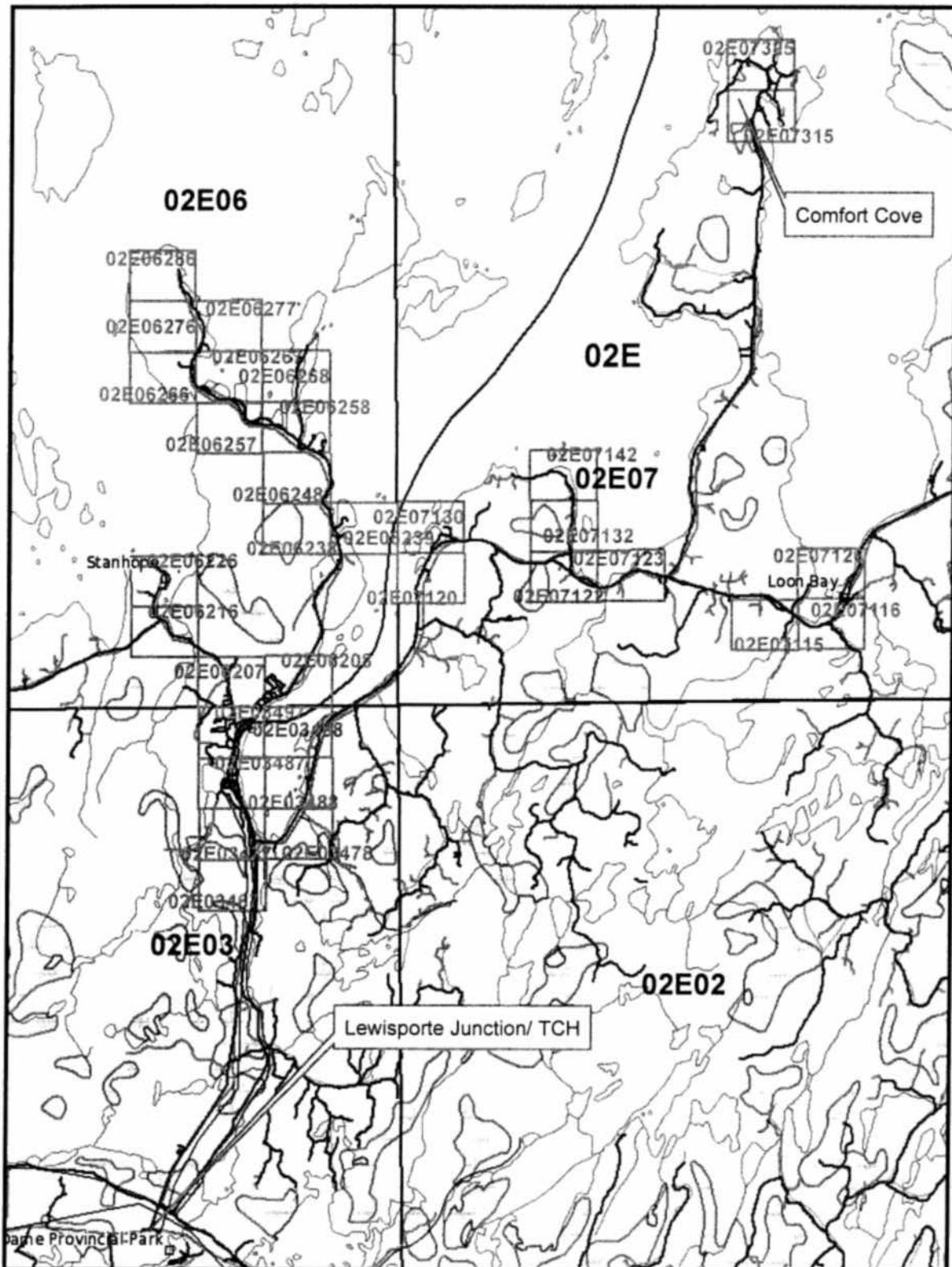
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Crown Lands Division



Government of Newfoundland & Labrador

Department of Environment & Conservation



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**For inquiries please contact
a Regional Lands Office.
Corner Brook - 637-2387
Gander - 256-1400
Goose Bay - 896-2488
St. John's - 729-2654
Clarenville - 466-4074**



Crown Lands Division

Scale 1:160,000
Compiled on Mar 31, 2010

0 2,250 4,500 9,000 13,500 18,000 Meters

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Department of Environment & Conservation



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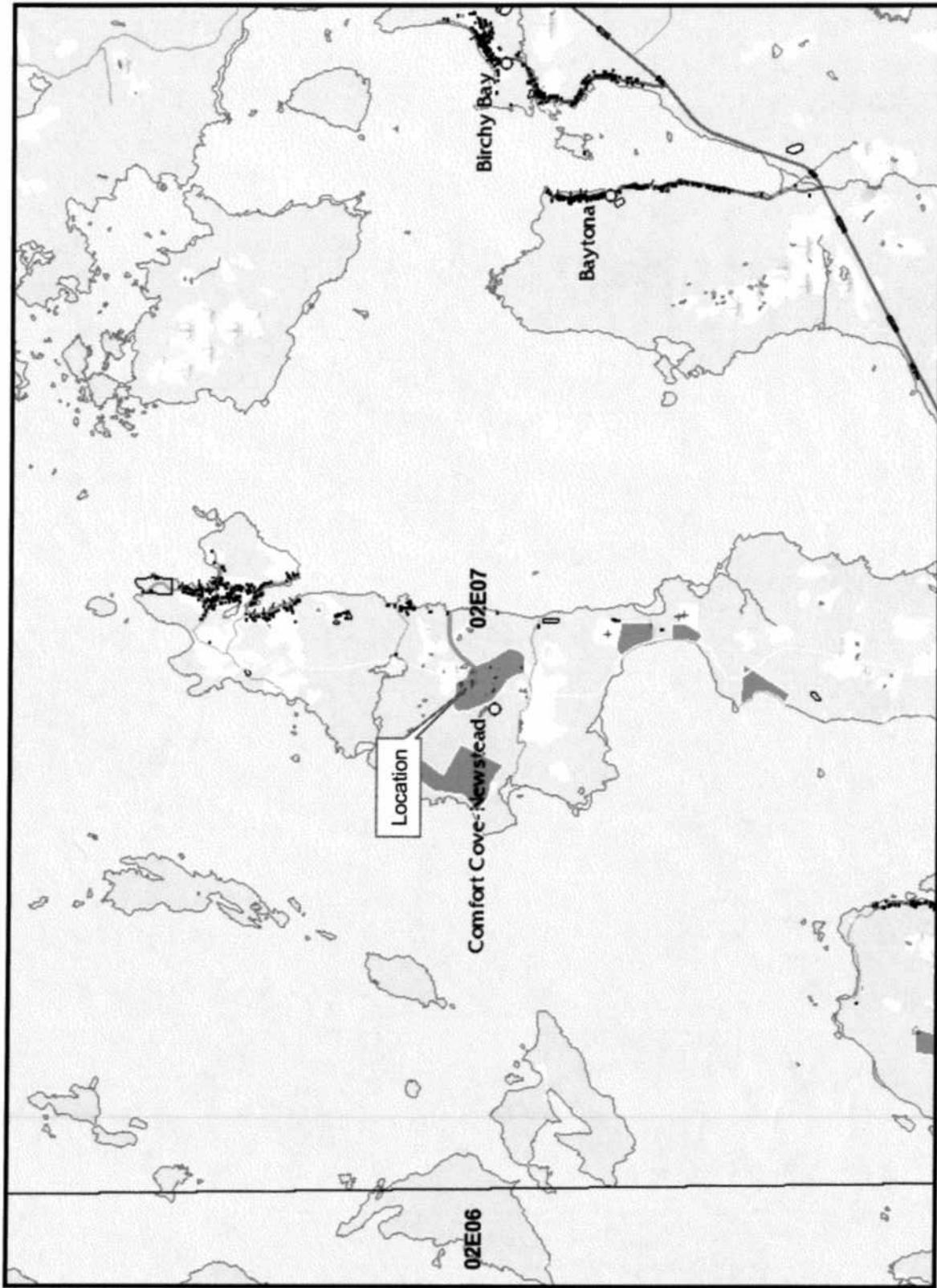
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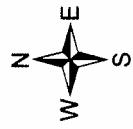
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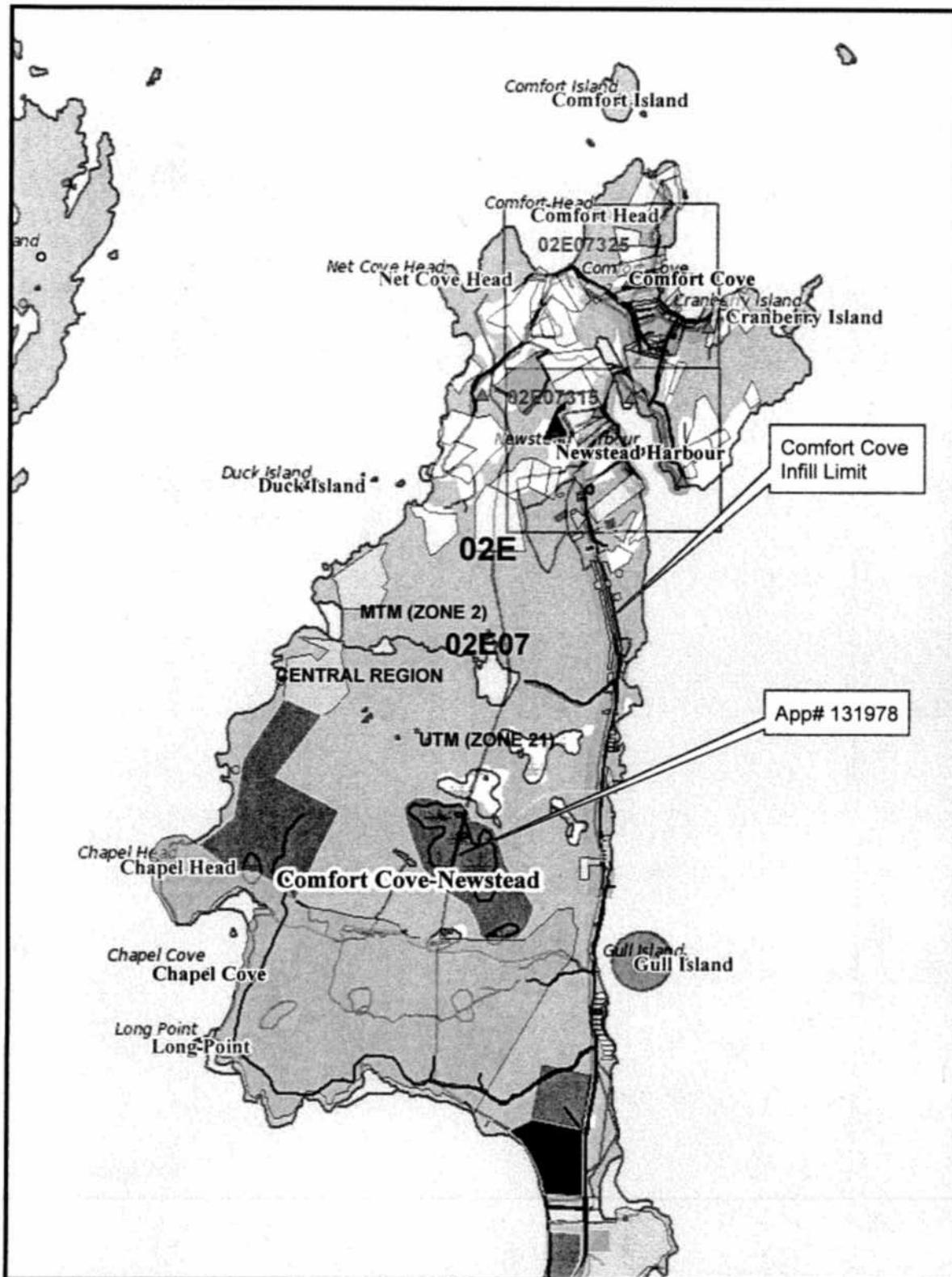
Scale 1:100,000



Metres
11,600
8,700
5,800
2,900
1,450
0

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Department of Environment & Conservation



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Crown Lands Division

0 700 1,400 2,800 4,200 5,600 Meters

Scale 1:50,000
Compiled on Mar 31, 2010

Approval of Undertaking:

The project is a list of main permits, licenses and approvals required for this project.

<u>Approval / Certification / License / Permit</u>	<u>Authority</u>
Environmental Registration	Dept. of Environment & Conservation
Environmental Assessment Approval	Dept. of Environment & Conservation
Crown land	Dept. of Environment & Conservation (received)
Fuel Storage & Handling	Dept. of Government Services (received)
Pesticides (applicator/operator)	Dept. of Environment & Conservation (received)
Water use and License	Dept. of Environment & Conservation
Permit to Alter a Body of Water	Dept. of Environment & Conservation
Workers Health & Safety Compensation	Workplace Health, Safety and Compensation Commission

Schedule:

The construction start date is whenever I get the go ahead from this and any other paper work and will 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.



Keith Cooper owner operator

General Manager:

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:

- * assuming civil engineer;
- * plan and design major civil projects such as buildings, roads, bridges, dams, water and waste management systems and structure 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 work;
- * ensure construction plans meet guidelines and specifications of building codes and other regulations;
- * establish and monitor construction work schedules.

Grower (General Farm Workers):

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 (General Farm Workers):

- * plant, fertilizer, cultivate, spray, irrigate and harvest crops.

Labourer (General Farm Workers):

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 (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 driver head to drive piling into earth to provide support for buildings, bridges or other structures.

Electrician (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 (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 determine faults and malfunctions;
- * diagnose faults or 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 manufacture'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)