



ENVIRONMENTAL IMPACT STATEMENT GUIDELINES

for the

Cavendish Beef Farm (Registration 2002)

Prepared by:

The 2002 Environment Assessment Committee for the Minister of the Department of Municipal Affairs and Environment, Government of Newfoundland and Labrador

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Table of Contents

PART I	4
1.0 INTRODUCTION	4
1.1 Purpose of the Environmental Impact Statement Guidelines	4
1.2 Environmental Assessment as a Planning Tool	5
1.2.1 <i>Sustainable Development</i>	5
1.2.2 <i>Precautionary Approach</i>	6
PART 2 – PREPARATION AND PRESENTATION OF THE EIS	6
PART 3 - OUTLINE OF THE EIS	7
EXECUTIVE SUMMARY	7
1.0 INTRODUCTION	8
1.1 Name of the Undertaking	8
1.2 The Proponent	8
1.3 Purpose of the Environmental Impact Statement	8
2.0 THE PROPOSED UNDERTAKING	8
2.1 Study Area	8
2.2 Need, Purpose, and Rationale for the Undertaking	9
2.3 Project Description	10
2.3.1 <i>General Layout</i>	10
2.3.2 <i>Construction</i>	10
2.3.3 <i>Operation and Maintenance</i>	11
2.3.4 <i>Decommissioning and Rehabilitation</i>	11
2.3.5 <i>Regulatory Framework and Government Oversight</i>	11
3.0 ALTERNATIVES	12
3.1 Alternatives to the Undertaking	12

3.2	Alternative Methods of Carrying Out the Undertaking	13
4.0	ENVIRONMENT.....	13
4.1	Key Issues.....	13
4.2	Existing Environment.....	14
4.2.1	<i>Atmospheric Environment.....</i>	14
4.2.2	<i>Aquatic Environment (General).....</i>	15
4.2.3	<i>Terrestrial Environment.....</i>	15
4.2.4	<i>Land and Resource Use</i>	16
4.2.5	<i>Tourism Resources.....</i>	16
4.2.6	<i>Heritage Resources.....</i>	16
4.2.7	<i>Communities</i>	17
4.2.8	<i>Economy, Employment, and Business.....</i>	17
4.3	Component Study.....	17
4.3.1	<i>Evaluation of Land Parcels (Existing and Proposed)</i>	17
4.3.2	<i>Odour</i>	18
4.3.3	<i>Avifauna Control and Management.....</i>	18
4.3.4	<i>Tourism and Potential Effects on Tourism Operators.....</i>	19
4.3.5	<i>Component Study Format</i>	19
5.0	DATA GAPS	19
6.0	ENVIRONMENTAL EFFECTS	20
6.1	Predicted Future Condition of the Environment if the Undertaking Does Not Proceed	20
6.2	Predicted Environmental Effects of the Undertaking.....	20
6.3	Accidents and Malfunctions.....	21
6.4	Cumulative Environmental Effects.....	22

6.5	Effects of the Environment on the Project	22
7.0	ENVIRONMENTAL PROTECTION	23
7.1	Mitigation	23
7.2	Environmental Emergency Contingency Plan	24
7.3	Personnel Emergency Response Plan	24
7.4	Environmental Effects Monitoring Plans (EEMP) and Follow-up Program	25
8.0	RESIDUAL EFFECTS AND DETERMINATION OF SIGNIFICANCE	26
9.0	ASSESSMENT SUMMARY AND CONCLUSIONS	26
10.0	PUBLIC PARTICIPATION	26
11.0	ENVIRONMENTAL PROTECTION PLAN (EPP)	27
12.0	REFERENCES	27
13.0	PERSONNEL	27
14.0	COMMITMENTS MADE IN THE EIS	28
15.0	COPIES OF REPORTS	28
	REFERENCES	28
	APPENDIX A	29
	APPENDIX B	30

PART I

1.0 INTRODUCTION

The proponent is proposing to establish a beef cattle industry near Cavendish, Trinity Bay. The initial herd size will be 26 animals with an eventual expansion to 100. This operation will be complementary to the proponent's existing mink farm operations, but will also require an additional 117 hectares of Crown land. Development will consist of clearing, seeding and fertilizing land for grazing and forage production.

1.1 Purpose of the Environmental Impact Statement Guidelines

On April 16, 2019, the Minister of Municipal Affairs and Environment (MAE) informed the proponent that an environmental impact statement (EIS) is required for the proposed Cavendish Beef Farm undertaking. The purpose of these guidelines is to identify for the proponent the nature, scope, and minimum information and analysis required in preparing the EIS.

These guidelines shall not be regarded as either restrictive or exhaustive. Concerns other than those identified herein may arise during the investigations associated with the EIS and additional detail, studies, and/or examination of components may be required. The provincial government is prepared to provide advice and assistance throughout the preparation of the EIS with regard to the identification of environmental concerns and appropriate assessment methodology.

The EIS is a statement of the proponent's environmental conclusions and commitments related to the undertaking, and must be explicitly endorsed by the proponent.

For the purpose of these guidelines:

"Environment" means the components of the Earth, and includes:

- a) air, land and water;
- b) plant and animal life, including human life;
- c) the social, economic, recreational, cultural and aesthetic conditions and factors that influence the life of humans or a community;
- d) a building, structure, machine or other device or thing made by humans;
- e) a solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from the activities of humans; or

- f) a part or a combination of those things referred to in subparagraphs (a) to (f) and the interrelationships between two or more of them.

“Environmental effect” means a change in the present or future environment that would result from an undertaking.

“Follow-up Program” means a program for:

- (a) determine the effectiveness of mitigation measures,
- (b) compliance with terms and conditions applicable to the release, and
- (c) to restore the affected environment to ecologically and socially acceptable levels.;

“Minister” means the provincial Minister of the Department of Municipal Affairs and Environment.

“Undertaking” means an enterprise, activity, project, structure, work or proposal and a modification, abandonment, demolition, decommissioning, rehabilitation and an extension of them that may, in the opinion of the minister, have a significant environmental effect. The term undertaking refers to a project that must be registered for environmental assessment. The terms “project” and “undertaking” are used interchangeably in these guidelines.

A “proponent” may be a person, corporation or government department that owns, manages, or controls a proposed project.

1.2 Environmental Assessment as a Planning Tool

Environmental assessment (EA) is a planning tool used to ensure that undertakings are considered in a sustainable and precautionary manner in order to avoid or mitigate the possible adverse effects of development on the environment.

1.2.1 Sustainable Development

Sustainable development means development that meets the needs of the present, without compromising the ability of future generations to meet their own needs. Environmental assessment enables the integration of environmental factors into the planning and decision-making process in a manner that promotes sustainable development and contributes to decision making that can provide net ecological, economic and social benefits to society. An undertaking

that is supportive of sustainable development strives to incorporate citizen participation into decision-making. The EIS shall consider the extent to which the undertaking would meet the objective of sustainable development.

1.2.2 Precautionary Approach

A purpose of environmental assessment is to ensure that proponents consider the precautionary principle. If an undertaking has the potential to cause a threat of serious or irreversible damage to the environment, the proponent must take all reasonable environmental protection measures to protect the environment, even if full scientific knowledge is lacking.

The Proponent shall indicate how the precautionary principle was considered in the design of the undertaking and demonstrate that the undertaking has been planned in a precautionary manner in order to ensure that serious or irreversible damage to the environment will not be caused.

PART 2 – PREPARATION AND PRESENTATION OF THE EIS

The EIS shall be written in terms understandable to the public, however, where the complexity of the issues addressed requires the use of technical language, a glossary defining technical words and acronyms shall be included.

A Table of Contents, providing the location of information in the final document by volume (if applicable), section, sub-section, and page number, is required. The EIS shall reference, rather than repeat, information previously presented in other sections of the document. For clarity and ease of reference, the EIS shall include a Table of Concordance that cross references the EIS guidelines so that points raised in the guidelines are easily located in the EIS.

The EIS shall provide charts, diagrams, and maps wherever useful to clarify the text, including a depiction of how the developed undertaking site will appear from both an aerial and terrestrial perspective. Where possible, maps shall use common scales to allow for comparison and overlay of mapped features and shall indicate common and accepted local place names. Geographic information shall be provided in standard Geographic Information System (GIS) mapping (digital) format (WGS84). The EIS and all associated reports and studies shall use System International (SI) units of measure and terminology.

The proponent shall explain and justify all methods used in the preparation of the EIS, including the use of scientific, engineering, local, and other knowledge. All hypotheses and assumptions shall be clearly identified and justified. All data collection methods, models, and studies shall be documented so that the analyses are transparent and reproducible. The degree of uncertainty, reliability, and sensitivity of models used to reach conclusions shall be indicated.

Where external sources of information or data are used, they shall be referenced within the body of the EIS and listed in a bibliography at the end. Where conclusions that are critical to the assessment of environmental effects are cited from other reports, the proponent shall provide sufficient detail of the original data and analysis to enable a critical review of that material and submit reference material as an appendix to the EIS. All conclusions regarding the receiving environment and predictions of the environmental effects shall be substantiated.

The EIS shall be a stand-alone document including the results of component studies (where applicable) upon which a critical review can be undertaken. The content of the EIS should be organized according to the format described in Part 3.

PART 3 - OUTLINE OF THE EIS

EXECUTIVE SUMMARY

The executive summary shall be provided as a separate, stand-alone document including key maps illustrating the project location and key project components containing the following information: identification of the proponent; a brief project description; alternatives to the undertaking; predicted biophysical and socio-economic environmental effects (including cumulative effects associated with the undertaking, and other existing and reasonably expected future undertakings in the vicinity of the undertaking site); mitigative measures; residual effects; follow-up and monitoring programs; public consultation; an outline of component studies; and a summary of the fundamental conclusions of the EIS. The Table of Concordance may be included in the executive summary.

1.0 INTRODUCTION

1.1 Name of the Undertaking

The undertaking has been assigned the name “Cavendish Beef Farm”.

1.2 The Proponent

This section shall introduce the proponent by providing the following pertinent information:

- name of corporate body and mailing address;
- name of chief executive officer (name, address, telephone number, and e-mail);
- principle contact person for the purpose of environmental assessment (name, address, telephone number, and e-mail); and
- key personnel, contractors, and/or sub-contractors responsible for preparing the EIS.

1.3 Purpose of the Environmental Impact Statement

The purpose of the EIS is to identify the important beneficial and adverse environmental effects associated with the undertaking, identify measures to mitigate against any adverse effects, determine the significance of residual environmental effects, and design a program of public consultation to identify and address public concerns associated with the undertaking.

2.0 THE PROPOSED UNDERTAKING

2.1 Study Area

The EIS shall contain a description of the geographical setting in which the undertaking will take place. Aerial images of the proposed undertaking site shall be provided indicating the locations of land use surrounding the proposed beef farm.

A precise description of the boundary of the undertaking shall be presented in relation to adjacent land use within the study area, accompanied by maps of appropriate scale showing the entire undertaking area with principle structures and appurtenant works. Maps shall be of a resolution of 1:30,000 or greater. The delineation of the study areas is crucial to scope the extent of the environmental assessment (GIS files must be provided). The rationale used to delineate the boundaries of the study area shall be provided. This description shall focus on those aspects of the

undertaking and its setting that are important in order to understand the potential environmental effects of the undertaking, including the following information:

- a) topography of the area, including vegetation, slope, water courses, and wetlands;
- b) current land use in the area including the locations of the nearest temporary and permanent dwellings; commercial, agricultural, and industrial facilities; and primary and secondary transportation routes;
- c) the environmental significance and value of the geographical setting in which the undertaking will take place, and the surrounding area;
- d) environmentally sensitive areas (e.g. wetlands, habitats of federally or provincially listed species at risk; other sensitive areas);
- e) other recreation areas (swimming areas, fishing, trapping, hunting areas, etc.) and tourism assets (hiking trails, coastal access, etc.);
- f) a description of the main industries in the region;
- g) a description of nearby local communities and tourism-related operations (cottages, RV park, etc.); and
- h) the former landfill site which overlaps with a portion of the Crown land application for pastureland.

An overview map/image and GIS file(s) shall be provided clearly depicting the proximity of the study area in relation to the above-noted features.

2.2 Need, Purpose, and Rationale for the Undertaking

The EIS shall describe the need and purpose for the undertaking (i.e., the problem or opportunity the undertaking is intended to solve or satisfy). This section provides the fundamental justification for the undertaking and the context for the consideration of alternatives to the undertaking. If the objectives of the undertaking are related to broader private or public sector policies, plans, or programs, this information shall also be included.

The statement of the undertaking's rationale shall be presented in quantifiable economic terms, shall provide a clear description of methods, assumptions, and conclusions used in the analysis, and shall include an evaluation of the following:

- a) rationale for the beef farm;
- b) projected environmental and socioeconomic impacts and benefits of the undertaking;
- c) description of alternatives (other potential locations); and

- d) estimation of capital costs of the undertaking.

2.3 Project Description

The proponent shall describe the scope of the undertaking for which the EIS is being conducted, including: the general lay-out, components, construction, operation, maintenance, and foreseeable modifications of all undertaking-related facilities; and the closure, decommissioning, and rehabilitation of undertaking site.

2.3.1 General Layout

The EIS shall provide a written and graphic description (e.g. maps and drawings) of the following physical features of the undertaking:

- a) a site plan of the proposed beef farm and all planned and/or predicted adjoining access roads or trails;
- b) location of former landfill site and dump site buffer in relation to Crown land application #138154 for the purpose of cattle pasture;
- c) the location and dimensions of all groundwater wells within 75 metres of the proposed project area;
- d) the location and dimensions of all bodies of water (including wetland areas);
- e) the location of all stream crossings and whether a culvert (or bottom-less culvert) or a bridge is required; and
- f) the distance of the proposed undertaking site (all parcels) within 10 kilometres from all residences, cottages, businesses, RV park, tourism operators/assets;

2.3.2 Construction

Details of construction materials, methods, and schedule shall be described in this section of the EIS, including, but not limited to, the following:

- a) duration of construction period including site clearing, preparation, roads, etc.;
- b) timing for land clearing of each parcel;
- c) any proposed wetland alterations;
- d) buffers;
- e) location of former landfill site and any potential impacts on Crown land application #138154 for the purpose of cattle pasture;
- f) culvert and/or bridge installation;

- g) erosion and sediment control, and any other measures that will be undertaken to stabilize and rehabilitate the site during construction (e.g. water resources management plan);
- h) location, dimensions and materials of any buildings including animal shelter structures;
- i) storage area for hazardous materials, fuels, and lubricants;
- j) list of construction equipment; and
- k) personnel requirements for each phase and component of construction, including projected workforce by month, employment equity, hiring practices, journeypersons, apprentices, students, and local preference.

2.3.3 Operation and Maintenance

Aspects of the operation and maintenance of the undertaking shall be described in detail in this section of the EIS, including but not limited to, the following:

- a) pasture operations including cattle and manure management;
- b) location of former landfill site and any potential impacts on Crown land application #138154 for the purpose of cattle pasture;
- c) forage land operations and maintenance including site preparation, manure spreading details, site drainage considerations, avifauna management, etc.;
- d) whether or not access road(s) to the forage areas will be controlled (e.g. gated, trail cameras at strategic locations along the route, etc.); and
- e) personnel requirements for each phase and component of operations, including projected workforce by month, employment equity, hiring practices, journeypersons, apprentices, students, and local preference.

2.3.4 Decommissioning and Rehabilitation

The EIS shall present a preliminary outline and conceptual decommissioning plan, and set out a commitment to address site rehabilitation, and removal or securing of infrastructure, equipment, and access to the site in the event of farm closure. The plan may be included in the body of the EIS or may be attached as a separate Appendix.

2.3.5 Regulatory Framework and Government Oversight

The proponent shall provide a comprehensive list of permits and regulatory approvals required for the undertaking. The list shall include the following details:

- activity requiring regulatory approval;
- name of permit, license or regulatory approval;

- name of legislation applicable in each case; and
- regulatory agency responsible for each permit, license, and approval.

The EIS shall identify:

- a) government policies, resource management plans, and planning or study initiatives pertinent to the undertaking and/or the environmental assessment;
- b) any relevant land use plans, land use zoning, development regulations, wildlife areas, tourism buffers, or community plans; and
- c) regional, provincial, and/or national objectives, standards, codes and/or guidelines that have been used by the proponent to assist in the development of the EIS.

3.0 ALTERNATIVES

The EIS shall identify and consider the environmental effects of alternative methods and/or sites for carrying out the undertaking. The EIS shall include a detailed analysis of the advantages and disadvantages of the preferred alternative as compared to the other alternatives. The level of detail for this analysis must be sufficient to allow the reader to understand the alternatives and how they compare to the preferred undertaking, and the reasons for selecting the preferred alternative and alternative methods, and for rejecting others. The EIS shall demonstrate how the preferred alternative contributes to sustainable development, how the precautionary approach has been applied in project planning, and provide an operational history of the existing farm site.

3.1 Alternatives to the Undertaking

This section shall include an analysis of the environmental effects and technical and economic feasibility of alternatives that led to the selected project alternative. The proponent shall describe at a minimum alternative cattle pasture and forage areas. This shall include, but not limited to:

- a) environmental, economic, and technical costs and benefits of the alternatives;
- b) market conditions, regulatory changes, and other factors that may have influenced the selection of the preferred alternative; and
- c) justification of the preferred alternatives to the undertaking based on the consideration of the environmental, economic, and technical costs and benefits.

3.2 Alternative Methods of Carrying Out the Undertaking

The EIS shall analyze and compare the design alternatives for the undertaking in relation to their environmental and social costs and benefits, including those alternatives which cost more to build and/or operate but which cause less harmful environmental effects.

The proponent shall provide the rationale for selecting undertaking components and shall discuss the best available technologies in relation to those being proposed. The proponent shall indicate known experience with, and effectiveness and reliability of the equipment, techniques, procedures, and policies, for each alternative, particularly under climate change projections for this area of Newfoundland, and their relation to best practices in Newfoundland and Labrador. At a minimum, the proponent shall describe alternative sites and route options for the undertaking that were considered. This shall include, but not limited to:

- environmental, economic, and technical costs and benefits of the alternatives;
- market conditions, regulatory changes, and other factors that may have influenced the selection of the preferred alternative; and
- justification of the preferred alternatives to the undertaking based on the relative consideration of the environmental, economic, and technical costs and benefits, including the potential impacts on residents, tourism operators, and other industries.

4.0 ENVIRONMENT

4.1 Key Issues

To better focus the EIS, the proponent shall identify the key issues related to the project. The issues can be revised and adjusted in relation to the information acquired in the field and during consultations held by the proponent in the preparation of the EIS.

The selection of key issues shall include, but not be limited to, consideration of the following factors:

- the effects of the project on the quality of life of people who live, make a living, visit, and partake in recreational and tourism activities in the vicinity of the project;
- the effects of the project on the water bodies (wetlands, streams, etc.), fish and fish habitat, and wildlife habitat in the project footprint and the surrounding areas; and
- the effects of the project on the tourism sector, including economic and employment value of the industry, number of operators, and visitor experience.

The ensuing sections focus on the components relevant to the key issues and effects of the project.

4.2 Existing Environment

The EIS shall describe relevant aspects of the existing environment prior to implementation of the project, which constitute the reference state of the environment. This section shall include a description of the existing biophysical and socio-economic environment that will be affected or might reasonably be expected to be affected, directly or indirectly, by the undertaking, with emphasis on the valued ecosystem components (VECs). If the information available from government or other agencies is insufficient or no longer representative, the proponent shall complete the description of the environment by conducting original surveys and research according to generally accepted practices. The EIS shall provide all of the information required to understand or interpret collected data (e.g. methods, survey dates and times, etc.).

A description of the existing environment shall be developed for the following environmental components:

- atmospheric environment;
- aquatic environment;
- terrestrial environment;
- land and resource use;
- tourism resources;
- heritage resources;
- communities; and
- economy, employment, and business.

VECs for each environmental component shall be described.

4.2.1 Atmospheric Environment

The proponent shall describe the relevant components of the atmospheric environment within the study area of the VECs, including the following:

- a) climate and meteorology, including monthly and annual minimum, maximum and mean values for precipitation, temperature and wind speed, prevailing wind direction, and storm events;

- b) indications of recent climate change observations and trends;
- c) existing sources of greenhouse gas emissions at or near the proposed project area;
- d) existing odour occurrences and duration (temporal and spatial); and
- e) existing fly ecology, occurrences, and duration (temporal and spatial);

4.2.2 Aquatic Environment (General)

The proponent shall describe the relevant components of the aquatic environment within the study area of the VECs, including the following:

- a) hydrological features such as the location of streams, ponds, tributaries, connected wetland complexes, and rivers;
- b) surface water and groundwater movement; and
- c) biological diversity and composition of freshwater aquatic species including:
 - species designated and listed under endangered species legislation, the *Endangered Species Act* and/or the *Species at Risk Act*, as vulnerable/special concern, threatened or endangered; and
 - species of special interest or conservation concern and their habitat, with an emphasis on rare species, including species with General Status Rankings of S1, S2, or S3), and species that have been assessed and recommended for listing as endangered, threatened, or special concern/vulnerable by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and/or the Species Status Advisory Committee (SSAC).

4.2.3 Terrestrial Environment

The proponent shall describe the relevant components of the terrestrial environment adjacent to and within the study area of the VECs, including the following:

- a) soil type in each Crown land application and if the soil type supports the intended use of forage or pasture depending on area intent;
- b) the location and extent of wetlands;
- c) terrestrial fauna, including mammals, avifauna, and waterfowl;
- d) species designated and listed under endangered species legislation, the *Endangered Species Act* and/or the *Species at Risk Act*, as vulnerable/special concern, threatened or endangered (species of special interest or conservation concern and their habitat, with an emphasis on rare species, including species with General Status Rankings of S1, S2, or S3, and species that have been assessed and recommended for listing as endangered,

threatened, or special concern/vulnerable by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and/or the Species Status Advisory Committee (SSAC));
and

- e) human-wildlife interaction.

4.2.4 Land and Resource Use

The proponent shall describe relevant land and resource use within the study area of the VECs, including the following:

- a) current land use in the area and the relationship of the project with any existing or future land use including traditional, private and Crown lands;
- b) description of the nearest potentially sensitive human receptors such as residences, cabins, commercial, industrial and tourist establishments, farms, and institutions that may be affected by the project;
- c) unique sites or special features, environmentally sensitive areas, reserves, and/or protected areas;
- d) tourism operators, tourism assets, and local recreational areas activities; and
- e) landscapes, including effects of the project on viewscales.

4.2.5 Tourism Resources

The proponent shall describe relevant tourism resources in the study areas of the VECs, including the following:

- a) tourism operators; and
- b) tourism assets.

4.2.6 Heritage Resources

The proponent shall describe relevant cultural heritage resources in the study areas of the VECs, including the following:

- a) historic and archaeological resources;
- b) paleontological resources;
- c) architectural resources; and
- d) burial, cultural, spiritual, and heritage sites.

4.2.7 Communities

The proponent shall describe relevant community elements in the study areas of the VECs, including the following:

- a) communities, industries, and population demographics;
- b) health services and social programs;
- c) family life, recreation, and culture;
- d) education and training facilities and associated programs; and
- e) housing, accommodations, and property values.

4.2.8 Economy, Employment, and Business

The proponent shall describe relevant economy, employment, and business elements in the study areas of the VECs, including the following:

- a) economy of the region;
- b) employment in the region;
- c) availability of skilled and unskilled labour in the region; and
- d) employment equity and diversity including under-represented groups.

4.3 Component Study

Component Studies are required for this EIS as per Section 12 of the *Environmental Assessment Regulations*. The Component Studies shall address baseline data requirements to support the evaluation of environmental effects and/or to develop mitigation measures and follow-up monitoring programs. Each Component Study shall be a stand-alone document that is subject to review as outlined by *Regulation*. The results of each study shall be included in the EIS. Component Studies shall be prepared for the following VECs:

4.3.1 Evaluation of Land Parcels (Existing and Proposed)

The proponent shall conduct a study of suitable land area within a study area that is based on the Ecological Land Classification (ELC) and provide a large enough/comprehensive area which allows for some project modifications as construction commences. The information provided in this study shall include, but not be limited to, a description and mapping of:

- a) wetlands and type;
- b) forestry domestic cutting areas;
- c) suitable lands for forage production;
- d) water flow direction and connection to adjacent water systems;

- e) locations of municipal water mains and residential lines; and
- f) proximity to residential, commercial, and tourism-related operations/assets.

4.3.2 Odour

In accordance with the Plume Dispersion Modeling Guidance Document prepared by the Department of Municipal Affairs and Environment, the proponent shall conduct a comprehensive modelling study which will consider 1) the odour baseline from the existing facility, and 2) the projected odour based on the facility operation described in registration document.

4.3.3 Avifauna Control and Management

The proponent shall conduct a comprehensive baseline survey to identify and characterize the presence of migratory birds and avian species at risk within the project footprint and surrounding areas. Environment and Climate Change Canada's Canadian Wildlife Service (ECCC-CWS) is available to review the survey methodology prior to the undertaking of the baseline survey.

Following the completion of the baseline survey, the proponent shall develop and implement a migratory bird management plan that includes appropriate preventative measures to minimize the risk of impacts to migratory birds and reduce the attraction of migratory birds to the project area. Further information on migratory birds can be found by reviewing "Guidelines to reduce the risk to migratory birds" at <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html>, and the "Avoidance Guidelines" at <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/guidelines.html>. ECCC-CWS is able to review the management plan prior to its implementation.

The proposed project may attract certain species of wildlife and migratory birds, such as gulls. The management plan should include information related to how the proponent intends to reduce the attraction of wildlife and migratory birds to the project, as well as plans for the potential exclusion/deterrence of migratory birds from the project area. ECCC-CWS recommends that the proponent consult with experts that specialize in the exclusion/deterrence of wildlife and migratory birds from agriculture projects in order to determine project- and site-specific strategies.

4.3.4 Tourism and Potential Effects on Tourism Operators

The proponent shall identify and map all tourism-related operators and Route 80 within 10 km of the proposed project area. The information provided in this study shall include, but not be limited to, a description of:

- a) all tourism-related establishments;
- b) tourism assets (walking/hiking trails, marina, etc.); and
- c) direct consultation with tourism operators to identify current effects and concerns regarding potential future effects.

4.3.5 Component Study Format

Component studies generally have the following format: i) Rationale/Objectives, ii) Study Area, iii) Methodology, and iv) Study Outputs.

i. Rationale/Objectives

In general terms, the rationale for a component study is based on the need to obtain additional data to determine the potential for significant effects on a VEC due to the proposed undertaking, and to provide the necessary baseline information for monitoring programs.

ii. Study Area

The boundaries of the study area shall be defined depending on the characteristics of the VEC being investigated.

iii. Methodology

Methodology shall be proposed by the proponent, in consultation with resource agencies, as appropriate. The methodologies for each component study shall be summarized in the EIS.

iv. Study Outputs

Study outputs shall be proposed by the proponent. Information and data generated shall be sufficient to adequately predict the effects of the undertaking on the VEC. Where new information becomes available as a result of baseline studies, additional component studies may be required. Component studies may be submitted as stand-alone documents, or as separate appendices to the EIS.

5.0 DATA GAPS

Information gaps from a lack of previous research or practice shall be described indicating baseline information which is not available or existing data which cannot accurately represent the

information requirements of the EIS guidelines. Where data and/or information gaps remain, the proponent shall describe efforts to resolve the gaps, including any direct consultation with groups, individuals, and others.

6.0 ENVIRONMENTAL EFFECTS

6.1 Predicted Future Condition of the Environment if the Undertaking Does Not Proceed

The EIS shall describe the predicted future condition of the environment with respect to the key issues, if the project does not proceed. The predicted future condition of the environment shall help to distinguish project-related effects from environmental change due to natural processes.

6.2 Predicted Environmental Effects of the Undertaking

The EIS shall contain a comprehensive analysis of the predicted environmental effects of the undertaking. If the effects are attributable to a particular phase (construction, operation, maintenance, rehabilitation), or to a particular component (drainage, vehicular traffic, dust, noise) then they should be designated as such. Predicted environmental effects (positive and negative, direct and indirect, and short- and long-term) shall be defined quantitatively where possible, and semi-quantitatively or qualitatively where more precise tools are not available, for each VEC. Environmental-effects predictions shall be explicitly stated and the theory or rationale upon which they are based shall be presented in terms of the following:

- nature;
- magnitude (qualitative and quantitative);
- geographic (spatial) extent;
- timing, duration and frequency;
- degree to which effects are reversible or mitigable;
- ecological context;
- socioeconomic context;
- level of knowledge;
- the capacity of renewable resources that are likely to be significantly affected by the project, to meet the needs of present and future generations;
- the extent to which biological diversity is affected by the project;
- the application of the precautionary principle, where applicable; and.

- impacts to business and market development value of the tourism sector.

Potential benefits and adverse effects of the undertaking on the surrounding biophysical and socio-economic environment shall be described.

The proponent shall describe the potential socio-economic and biophysical effects of the project on the surrounding environment including the local area and the province with a focus on, but not limited to the following:

- a) business development opportunities from construction/ operations:
 - development of local business networks,
 - acquisition of goods and services, and
 - employment.
- b) potential effects of the project on:
 - terrestrial and aquatic wildlife and wildlife habitat including avifauna;
 - plants (including lichens and moss) with emphasis on rare species and species recommended for or listed under endangered species legislation;
 - topography, including soil erosion, surface drainage, and wetlands; and
 - human receptors, including the potential effects of odor and flies on quality of life, market value of nearby properties, future adjacent land use, and visitors to nearby business establishments and tourist attractions.

6.3 Accidents and Malfunctions

The proponent will identify and describe the potential accidents and malfunctions related to the project, including an explanation of how those events will be identified, potential consequences (including the potential environmental effects), the worst case scenarios as well as emergency scenarios that can reasonably be expected to occur, and the effects of these scenarios. The proponent will explain the quantity, mechanism, concentration, rate, form, and characteristics of deposits and other materials likely to be released into the environment during malfunction and accident events. Potential accidents and malfunctions may include, but not be limited to, the following:

- a) fuel spills or leaks during both construction and operations;
- b) road and/or bridge/culvert failure (e.g. washout due to rainfall): and
- c) other releases of concerning substances (manure, fertilizers, waste products, etc.)

The proponent shall assess the likelihood of occurrence and consequence severity of the accidents and malfunctions.

6.4 Cumulative Environmental Effects

The proponent shall identify and assess the project's cumulative environmental effects. Cumulative effects are defined as changes to the environment combined with the effects of past, present, and planned projects and/or activities. The proponent shall consider the cumulative environmental effects of the project where there is overlap with other projects and activities within or near the study area, and shall:

- a) consider the potential environment effects of other land uses and developments that may be facilitated by the project and its infrastructure, including other access roads and trails, mineral exploration in areas adjacent to the farm and areas further afield that may be accessed using the access roads, all-terrain vehicle use (including potentially off-road), remote cottage development, etc. The proponent's assessment should emphasize the cumulative effects on the main VECs that could potentially be affected by the project and the potential land uses and developments the project may facilitate;
- b) present a justification for the geographic and temporal boundaries of the cumulative effects assessment;
- c) describe and justify the choice of projects and selected activities for the cumulative effects assessment;
- d) describe the mitigation measures and determine the significance of the residual cumulative effects; and

6.5 Effects of the Environment on the Project

Environmental changes and hazards that may occur and may affect the project shall be described (e.g. severe wind and precipitation, snowstorms, extended periods of extreme cold and or heat). The EIS shall take into account the potential influence of climate change scenarios (e.g. increased severity and frequency of storms, and flooding), as well as local knowledge. The influence that these environmental changes and hazards may have on the project shall be predicted and described. The environmental effects that may occur as a result of the environment acting on the project shall be assessed.

7.0 ENVIRONMENTAL PROTECTION

7.1 Mitigation

The EIS shall identify and discuss proposed measures that will be implemented to mitigate the adverse effects and enhance beneficial effects of the project. The rationale for and effectiveness of the proposed mitigation and enhancement measures should be discussed and evaluated. The proponent, where possible, should refer to similar situations where the proposed mitigation has proven to be successful. Mitigation failure should be discussed with respect to risk and severity of consequence.

The proponent shall identify who is responsible for implementing the mitigative measures and the system of accountability, including the obligations of contractors and subcontractors. Mitigation measures shall be described for construction, operation, maintenance, modification, and decommissioning activities associated with the farm, and shall include, but not be limited to, the following:

- a) procedures to minimize odour;
- b) procedures to minimize flies;
- c) procedures that demonstrate this project will prevent adverse farm-related effects to tourism operators in the area;
- d) procedures to minimize the effects of the project on aesthetics and viewscales;
- e) procedures to minimize erosion, surface run-off, and exposed soil during construction;
- f) procedures to conserve wetlands (e.g. avoiding development on wetlands, maintaining a minimum 30 metre undisturbed buffer around wetlands and watercourses, and diverting surface runoff from construction and operations away from wetlands);
- g) procedures to reduce habitat disturbance on wildlife, including avifauna birds (e.g. undertaking vegetative clearing and excessive noise activities outside of the nesting, breeding and brood rearing period (April 15 to August 15 in this region)). Where vegetation clearing is not avoidable and a nest is found:
 - o the nest and neighbouring vegetation should be left undisturbed until nesting is completed;
 - o construction activities should be minimized in the immediate area until nesting is complete; and

- for guidance on how to avoid the incidental take of migratory birds nests and eggs, please refer to the Avoidance Guidelines (<http://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=AB36A082-1>).
- h) measures to prevent adverse effects to water quality resulting from site water run-off or soil erosion; and
- i) procedures to minimize project-related greenhouse gas emissions; and
- j) measures to reduce the attraction of wildlife, including avifauna to the project area.

Other mitigation measures that were considered may be identified, and the rationale for rejecting these measures explained. The best available technology and best management practices shall be considered. Avoidance of environmental effects through implementation of scheduling and siting constraints and pollution prevention opportunities shall be considered. Trade-offs between costs and predicted effectiveness of the mitigation measures shall be justified.

7.2 Environmental Emergency Contingency Plan

The EIS shall include an Environmental Emergency Contingency Plan providing information on the location of on-site emergency response equipment, and outlining procedures to respond to accidents, malfunctions, and emergencies, including, but not limited to:

- a) accidental spills and/or releases of hazardous materials including gasoline and associated products; and
- b) other project components or systems that have the potential, through accident or malfunction, to adversely affect the natural environment.

In developing a contingency plan, it is recommended that the Canadian Standards Association publication Emergency Planning for Industry CAN/CSA-Z731-03, be consulted as a reference. Service NL (Environmental Protection) should be another resource contacted and a sample Contingency Plan can be supplied to the proponent as a template to work from and expand as necessary. The Environmental Emergency Contingency Plan may be included as a separate appendix.

7.3 Personnel Emergency Response Plan

Provide an emergency response plan describing measures to be taken to effectively respond to any foreseeable mishap involving personnel that may occur as a result of the undertaking. The following minimum items should be considered when developing such a plan: a proper first-aid

kit, communication devices, a list of emergency names and numbers appropriately placed; and an action plan including the roles and responsibilities of workers.

The Personnel Emergency Response Plan may be included as a separate appendix.

7.4 Environmental Effects Monitoring Plans (EEMP) and Follow-up Program

The EIS shall describe the environmental and socio-economic monitoring and follow-up programs to be incorporated into construction, operation, and maintenance activities. The purpose of the follow-up program is to verify the accuracy of the predictions made in the assessment of the effects, as well as the effectiveness of the mitigation measures. The duration of the follow-up program shall be as long as is needed to evaluate the effectiveness of the mitigation measures. If the EEMP identifies unforeseen adverse environmental effects, the proponent shall commit to adjusting existing mitigation measures, or if necessary, develop new mitigation measures. The proposed approach for monitoring shall be described and shall include:

- i. the objectives of the monitoring program and a schedule for collection of the monitoring data required to meet these objectives;
- ii. the sampling design, methodology, selection of the subjects and indicators to be monitored, and their selection criteria;
- iii. the frequency, duration and geographic extent of monitoring, including justification/rationale;
- iv. reporting and response mechanisms, including criteria for initiating a response and procedures;
- v. the approaches and methods for monitoring cumulative effects of the project with existing and future developments in the project area;
- vi. procedures to assess the effectiveness of monitoring and follow-up programs, mitigation measures; and
- vii. a communications plan to describe the results of monitoring to interested parties.

The EIS shall describe monitoring plans including, but not limited to the following:

- a) tourism economic impacts.

The proponent shall prepare and submit the EEMP subsequent to the completion of the EIS, but before the initiation of project construction.

8.0 RESIDUAL EFFECTS AND DETERMINATION OF SIGNIFICANCE

Residual effects are those adverse environmental effects which cannot be avoided or fully mitigated through the application of environmental control technologies and best management practices. The EIS shall list and contain a detailed discussion and evaluation of residual effects, which shall be defined in terms of the parameters outlined in section 6.2.

The EIS shall contain a concise statement and rationale for the overall conclusion relating to the significance of the residual adverse environmental effects. The EIS will, for ease of review, include a matrix of the environmental effects, proposed mitigations, and residual adverse effects.

9.0 ASSESSMENT SUMMARY AND CONCLUSIONS

The EIS shall summarize the overall findings of the environmental assessment, with emphasis on the key environmental issues identified.

10.0 PUBLIC PARTICIPATION

The EIS shall describe a planned program of public participation and consultation, including, but not limited to the following:

- a) an opportunity for interested members of the public to meet with the proponent at a place adjacent to or within the geographical area of the undertaking, or as the minister may determine, in order to:
 - i. provide information concerning the undertaking to the people whose environment may be affected by the undertaking;
 - ii. describe the rationale for the beef farm, impacts to wildlife, impacts to tourism, and any other pertinent details to address public concerns;
 - iii. record and respond to the concerns of the local community raised during the public meeting regarding the environmental and socioeconomic effects of the undertaking, and to describe those concerns and the proponent's response to those concerns in a separate section of the EIS; and
 - iv. conduct the meeting in compliance with the legislation and with divisional policy included in Appendix B.

11.0 ENVIRONMENTAL PROTECTION PLAN (EPP)

The proponent shall prepare an EPP for construction and operation of the Cavendish Beef Farm project, for approval by the Minister of Municipal Affairs and Environment, prior to commencing construction. The EPP shall be a stand-alone document that targets the site foreperson, the proponent's occupational health and safety staff, the proponent's environmental staff and any government environmental surveillance staff. The EPP shall address construction, operation and maintenance activities associated with the project. A proposed Table of Contents and an annotated outline for the EPP is to be presented in the EIS which shall address the major construction and operational activities, permit requirements, mitigation measures and contingency plans, as follows:

- proponent's environmental policies;
- environmental compliance monitoring;
- environmental protection measures;
- mitigation measures;
- permit application and approval planning;
- contingency planning for accidental and unplanned events;
- statutory requirements; and
- revision procedures and contact lists.

The proponent shall prepare and submit the EPP for approval subsequent to the completion of the EIS, and prior to the initiation of project construction.

12.0 REFERENCES

The proponent shall prepare a complete and detailed bibliography of all studies used to prepare the EIS. Supporting documentation shall be referenced in the EIS and submitted in separate volumes or attached as an appendix to the EIS.

13.0 PERSONNEL

The names and qualifications of all key professionals responsible for preparing the EIS and supporting documentation shall be included. A description of the qualifications of scientists conducting surveys and scientific studies associated with the undertaking shall be provided.

14.0 COMMITMENTS MADE IN THE EIS

The EIS is a statement of the proponent's environmental conclusions and commitments related to the project, and must be explicitly endorsed by the proponent. The EIS shall provide a list of all commitments made regarding environmental mitigation, monitoring, and follow-up. Each commitment must be cross-referenced to the section of the EIS where it has been made.

15.0 COPIES OF REPORTS

The EIS should be prepared in accordance with these guidelines and, once completed, the proponent shall submit printed and electronic copies of the EIS to the Department of Municipal Affairs and Environment, as specified below:

- 12 electronic copies (USB drives)
- 12 paper copies

Stand-alone studies associated with the EIS, including component studies, EPPs, and EEMPs shall be submitted to the Department of Municipal Affairs and Environment in the manner specified above. In addition, the proponent shall make a printed copy of the EIS and the associated stand-alone studies available at a public viewing center in the project vicinity, and in any additional communities to be designated by the Department of Municipal Affairs and Environment.

REFERENCES

Newfoundland and Labrador Environmental Protection Act.

<http://www.assembly.nl.ca/legislation/sr/statutes/e14-2.htm>

Newfoundland and Labrador Environmental Assessment Regulations

<http://www.assembly.nl.ca/legislation/sr/regulations/rc030054.htm>

APPENDIX A

Environmental Protection Act, 2002

Section 57 - Environmental Impact Statement

57. An environmental impact statement shall be prepared in accordance with the guidelines, and shall include,

- a) A description of the undertaking;
- b) The rationale for the undertaking;
- c) The alternative methods of carrying out the undertaking and alternatives to the undertaking;
- d) A description of the
 - i. present environment that will be affected or that might reasonably be expected to be affected, directly or indirectly, by the undertaking, and
 - ii. predicted future condition of the environment that might reasonably be expected to occur within the expected life span of the undertaking, if the undertaking was not approved;
- e) A description of the
 - i. effects that would be caused, or that might reasonably be expected to be caused, to the environment by the undertaking with respect to the descriptions provided under paragraph (d), and
 - ii. actions necessary, or that may reasonably be expected to be necessary, to prevent, change, mitigate or remedy the effects upon or the effects that might reasonably be expected upon the environment by the undertaking;
- f) An evaluation of the advantages and disadvantages to the environment of the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking;
- g) A proposed set of control or remedial measures designed to minimize any or all significant harmful effects identified under paragraph (e);
- h) A proposed program of study designed to monitor all substances and harmful effects that would be produced by the undertaking; and
- i) A proposed program of public information.

APPENDIX B

Department of Municipal Affairs and Environment Environmental Assessment Division

REQUIREMENTS FOR PUBLIC MEETINGS/INFORMATION SESSIONS

Purpose: To clarify for proponents and the public, the format, scheduling, number, notification requirements, etc. for public consultations in relation to undertakings required under the *Environmental Protection Act, SNL 2002 cE-14.2*, (Section 58) to prepare an Environmental Impact Statement (EIS).

1. The proponent is required to conduct a public meeting/information session under an EIS process as specified in the legislation. This requirement shall be specified in the project EIS guidelines.
2. A public meeting shall normally be held in the largest local population centre within the project area. This shall be the minimum requirement. In addition, when demonstrated public interest or concern warrants, additional meetings may be required. This may take the form of additional meetings to be held in major regional or provincial population centres, or possibly additional meetings within the original community. Such requirements are at the discretion of the Minister based on consensus advice from the environmental assessment committee (EAC) chairperson, and based upon public interest as evidenced by public submissions received.
3. The format of the public meeting may be flexible, and the proponent may propose a suitable format for approval by the EAC. The format may range from formal public meetings chaired by the proponent or representative with presentations followed by questions and answers, to a less formal open house forum where the public may discuss the proposal with the proponent or representative. Other formats may be considered by the EAC and must meet the following objectives: 1) the provision of information concerning the proposed undertaking to those who may be affected, and 2) to recording of concerns of the local community regarding the undertaking.
4. The proponent must ensure that each public meeting is advertised in accordance with the following specified public notification requirements, which shall form part of the project guidelines when appropriate (proponent to substitute appropriate information for italicised items):

PUBLIC NOTICE

Public Information Session on the Proposed

Name of undertaking
Location of undertaking

shall be held at
Date and Time
Location

This session shall be conducted by the Proponent,
Proponent name and contact phone number,
as part of the environmental assessment for this Project.

The purpose of this session is to describe all aspects of the proposed project, to describe the activities associated with it, and to provide an opportunity for all interested persons to request information or state their concerns.

ALL ARE WELCOME

- Minimum newspaper ad size: 2 columns wide.
- Minimum posted ad size: 10 cm x 12 cm.
- Minimum newspaper ad frequency (to be run in newspaper(s) locally distributed within each meeting area or newspaper(s) with the closest local distribution area):
 - for dailies, the weekend between 2 and 3 weeks prior to each session and the two consecutive days prior to each session, OR
 - for weeklies, in each of the two weeks prior to the week in which the session is to be held.
- Minimum posted ad coverage: In the local Town or City Hall or office, to be posted continually for not less than 15 days prior to each session. The proponent is advised to request that the ad and/or notice of the meeting be placed on the community web site, for each community within/adjacent to the project study area, and for each community in which a public meeting will be held, posted continually for not less than 15 days prior to each session.
- Any deviation from these requirements for any reason must receive the prior written approval of the Minister.
- The proponent must provide the chairperson of the EAC with copies of advertisements and public notices.