Atlantic Cultivation Ltd.
(81038 Newfoundland and Labrador Inc.)

St. John's, Newfoundland and Labrador

Environment Assessment Report December 2018

Pursuant to Part X. Section 49 of the Newfoundland and Labrador Environmental Protection Act, SNL 2002

December 14th, 2018

Government of Newfoundland and Labrador
Environment and Conservation
Pollution Prevention Division
4th Floor, Confederation Bldg., West
P.O. Box 8700
St. John's, NL
A1B 4J6

To whom it may concern:

RE: Atlantic Cultivation Ltd. – Environmental Assessment, Cannabis Production Facility

Please accept the following document as an outline of Atlantic Cultivation's plans to build and operate a state- of-the-art cannabis production and processing facility in Mount Pearl, Newfoundland & Labrador. Our Access to Cannabis for Medical Purposes (ACMPR) application was developed over six months in consultation with various industry specific consultants and suppliers to ensure our future facility will be fully compliant to Health Canada's stringent requirements.

Atlantic Cultivation intends to fulfill its commitment to the Province of Newfoundland and Labrador by ensuring our build out phases, as well as ongoing operations, are continuously compliant with all relevant by-laws and regulatory statutes.

Thank you for this opportunity.

Kindest Regards,

Mr. Donald Anthony
Chief Executive Officer
Atlantic Cultivation Ltd.

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1.0 Engaging Entity

Atlantic Cultivation Ltd. (81038 Newfoundland and Labrador Inc.)

2.0 Proponent / Company Profile

Atlantic Cultivation is an applicant under the Access to Cannabis for Medical Purposes Regulations in Canada.

2.1 Atlantic Cultivation Ltd. / 81038 Newfoundland and Labrador Inc.

2.2 The proposed facility will be constructed at:
138 Clyde Ave
Mount Pearl, Newfoundland and Labrador
A1N 4T5

The current corporate address for the company is:
1 Crosbie Place, Suite 200, P.O. Box 55
St. Johns, Newfoundland and Labrador
A1B 3Y8

2.3 The management team of the corporate entity is as followed:
Chief Executive Officer: Donald Walter Anthony
D.O.B: November 3rd 1967
Address: 17 Emylia Place, St. Phillips, Newfoundland and Labrador, A1M 2V7
Telephone Number: 1-709-895-7777

Chief Operating Officer: Christopher Crosbie
D.O.B: October 11th 1983
Address: 16 Water Street, Unit 102, St. John's, Newfoundland and Labrador, A1C 0A7
Telephone Number: 1-709-330-0703

2.4 The principal contact person will be the Chief Operating Officer and proposed Senior Person in Charge of the facility, Mr. Christopher Crosbie.

3.0 Purpose / Undertaking

Atlantic Cultivation Ltd. (81038 Newfoundland and Labrador Inc.) will be undertaking the project.

3.1 The purpose of this engagement is for Atlantic Cultivation to launch a fully functional licensed cannabis production facility in Mount Pearl Newfoundland and Labrador. Atlantic Cultivation currently has an application in process with Health Canada and the Office of Medical Cannabis under the Access to Cannabis for Medical Purposes Regulations to become a Licensed Producer of cannabis in Canada.

Once Atlantic Cultivation's application is approved through the Office of Medical Cannabis they will be permitted to conduct the following activities with all legal forms of regulated cannabis:

- Possession
- Production
- Sale or Provision
- Shipping
- Transportation
- Delivery
- Destruction

Atlantic Cultivation intends to produce and sell cannabis with a focus on the Newfoundland and Labrador population first, then nationally and where international jurisdictions allow for exportation.

The current proposed facility site is located at 138-142 Clyde Ave and 135 Glencoe Drive, Mount Pearl, in the Donovans Industrial Park.

From a security standpoint, the location was assessed and approved through a security threat risk assessment. Industry expert and security professionals, *David Hyde and Associates*, completed the assessment. The report was completed and applied to identify security-related risks, with a view of initiating and recommending countermeasures and mitigation strategies to detect and deter threats and reduce vulnerability to potential crime and security incidents.

4.0 Description of Undertaking

4.1 Location

The subject property is located in Donovans Industrial Park. The primary land use in this area is industrial. A map indicating the exact location of the subject property is contained below. Additional photographs of the subject property and maps are located in the Appendices.

Neighbourhood Map

Source: Google Maps

Property Description – Position and Access	
Site Position	End of cul-de-sac on Clyde Avenue Mid-block on Glencoe Drive
Regional / Local Access	Kenmount Road and the Trans-Canada Highway are both accessible from the north east providing both local and regional access to the subject property.
Public Transit	Metrobus Route 22 services the Donovan's Industrial Park area. There are also a number of taxi services available.

Property Description – Adjacent Land Uses	
North	There are a number of industrial properties to the north, including UPS Customer Centre and Loomis Express. Further north is access to Kenmount Road and the Trans-Canada Highway.
South	Directly south of the subject property is predominately the industrial developments along Glencoe Drive, including Madsen Power Systems and Rolls-Royce Canada. Further south is the Trans-Canada Highway.
West	West of the subject property are the industrial developments along Glencoe Drive, including Genoa Design International and Miller Tirecraft.
East	East of the subject property are the industrial developments along Dundee Avenue, including TechnipFMC and Interex Systems. Further east are residential developments within the City of Mount Pearl.

4.2 Physical Features

4.2.1 Proposed Undertaking & Upgrades

The facility will include the development and construction of a 110,000ft^2 two-story, pre-engineered steel-frame structure. The cultivation area will contain 31 grow rooms along with associated processing rooms, parking areas for staff, and required security features.

The property perimeter will be outfitted with an industrial style chain-link fence with barbed wire to ensure the protection of employees and internal products. The facility will be secure in compliance with ACMPR, access-controlled, and monitored 24 hours a day and 7 days a week.

The property has the appropriate access to utility services that will be required for the ongoing functioning of the facility.

4.2.2 Existing Biophysical Layout

The subject property is located in Donovans Industrial Park. The primary land use in this area is industrial. Additional photographs of the subject property and maps are located in the Appendices. Atlantic Cultivation intends to preserve as much of the current vegetation as possible. They are committed to the long-term management of valuable natural resources while encouraging continued sustainable development with the suppliers and contractors they work with. Atlantic Cultivation will demonstrate good land management principles, particularly in relation to protecting soil, water and biodiversity values.

The property is generally level and at grade with Clyde Avenue and Glencoe Drive. The property has a frontage of 200.5 feet along Clyde Avenue and 185.0 feet along Glencoe Drive. The site is accessible from Clyde Avenue and Glencoe Drive with gated entrances on either side of the property. There is a gravel parking area at the northern boundary of the property with ample room for truck turning. Based on review of the survey plans and legal descriptions, there are no encumbrances noted.

Please refer to topographical site documentation in APPENDIX 1.

4.3 Structural Upgrades

4.3.1 Site Development

The build out of the facility will occur once all approvals are given from the municipality.

The key stages of site development include:

- Site Preparation
- Concrete / Foundations
- Structural Components
- Processing Facility & Warehouse Construction
- Security Infrastructure
- Electrical & Mechanical Components
- Finishings

4.3.2 Sources of Environmental Contaminants

During the construction phases potential pollution sources may arise from the following. Atlantic Cultivation has outlined corrective actions and preventative measures following each source.

Air Pollution

Construction activities that contribute to air pollution include: land clearing, operation of diesel engines, demolition, burning, and working with toxic materials. All construction sites generate high levels of dust (typically from concrete, cement, wood, stone, silica) and this can carry for large distances over a long period of time. Atlantic Cultivation will ensure compliance with all local, provincial and federal bylaws and follow appropriate procedures to mitigate this type of contaminant.

Water Pollution

Sources of water pollution on building sites include: diesel and oil; paint, solvents, cleaners and other harmful chemicals; and construction debris and dirt. When land is cleared it causes soil erosion that leads to silt-bearing run-off and sediment pollution. Silt and soil that runs into natural waterways turns them turbid, which restricts sunlight filtration and destroys aquatic life.

Surface water run-off also carries other pollutants from the site, such as diesel and oil, toxic chemicals, and building materials like cement. When these substances get into waterways they poison water life and any animal that drinks from them. Pollutants on construction sites can also soak into the groundwater, a source of human drinking water. Once contaminated, groundwater is much more difficult to treat than surface water. Solid waste generated during the construction of the project can potentially negatively impact area watercourses, as well as the esthetics of the area. Good housekeeping practices during the construction phase should effectively mitigate any potential negative effects related to solid waste.

Noise Pollution

Construction sites produce a lot of noise, mainly from vehicles, heavy equipment and machinery, and from people shouting and radios turned up too loud.

During the long-term operation of the facility, Atlantic Cultivation intends to reduce and control potential pollution sources through incorporating an environmental management strategy. By employing these practices, Atlantic Cultivation is well positioned to control and prevent pollution.

Risk Mitigation

A few areas that Atlantic Cultivation will focus on are:

- No burning of materials on site
- Reducing noise pollution through careful handling of materials; modern quiet power tools, equipment and generators; low impact technologies; and wall structures as sound shields
- Using low sulphur diesel oil in all vehicles and equipment engines, and incorporating the latest specifications of particulate filters and catalytic converters
- Collecting any wastewater and storm water generated from site activities in settlement tanks, screen, discharge the clean, water and dispose of remaining sludge according to environmental regulations

- Cover and protect all drains on site
- In-depth protocols will be in place for monitoring toxic substances to prevent spills and possible contamination
- The use of non-toxic paints, solvents and other hazardous materials will be utilized whenever possible

4.3.3 Waste Management

Typical commercial solid wastes will be generated from the site. These will be collected and stored in proper waste containers for off-site disposal. All recyclable materials, such as plastic and cardboard, will be recycled. Cannabis waste will be reduced by Atlantic Cultivations oil processing systems; however, any controlled cannabis waste will be denatured as per Health Canada requirements and appropriately logged, tracked and disposed of.

Please refer to Atlantic Cultivation's Standard Operating Procedure 'Cannabis Waste Handling Process and Destruction Method' in APPENDIX 3.

4.3.4 Storm Water & Waste Water Management

The environmental impact of wastewater and storm water can be substantial. Solids in both wastewater and storm water form sediments and can eventually clog drains, streams and rivers. Grease particles form scum and are aesthetically undesirable. The nutrients Nitrogen and Phosphorous cause eutrophication of water bodies, with lakes and slow-moving waters affected to a greater degree than faster flowing waters.

Other pollutants in wastewater and storm water are heavy metals and possible toxic chemical hazardous substances. In high enough concentrations, these heavy metals are toxic to bacteria, plants and animals, and to people. Toxic materials may also be disposed with household wastewater.

Spills of chemicals, particulates from motor vehicle exhausts can similarly contaminate storm water. These pollutants will affect downstream receiving waters and treatment systems if the storm water is treated.

Atlantic Cultivation will be adhering to all environmental requirements under the Environmental Protection Act to prevent any storm water or waste water contamination. Atlantic Cultivation will be discharging its wastewater or sanitary waste directly into sanitary sewers to ensure no contaminations of soil or local water sources are created. Storm water will also be collected and discharged into the engineered purpose storm sewer and not left to erode facility structures or local landmasses.

4.3.5 Air Quality & Odour Control

Air Pollution Control Regulations set allowable limits for air contaminants under the Environmental Protection Act of Newfoundland.

Air quality and odour control regulations have been established in Canada under the ACMPR. Some municipalities allow a facility to emit any odour that is considered a normal farm practice. Atlantic Cultivation understands that air will be exhausted from the facility and with it the potential for odours from the operations to impact neighbouring communities. Odours emitted from cannabis facilities are not well supported and Atlantic Cultivation is committed to having significant measures in place to ensure no cannabis odors are being released from the facility during normal operations and causing a nuisance to neighbouring communities.

As per Section 61 of the ACMPR it states 'Areas must be equipped with a system that filters air to prevent the escape of odours and, if present pollen'.

Atlantic Cultivation has designed a sophisticated HVAC system that will be installed throughout the entire facility. This system will include air scrubbers, carbon and HEPA filters to mitigate all odour escaping from the facility. Through regular Health Canada inspections, the facility will be assessed continuously on its odour protection practices.

APPENDIX 3 will provide information pertaining to the HVAC system.

4.3.6 Pesticide Use

As of April 9th, 2018, there are 21 registered pesticides approved by The Pest Management Regulatory Agency for use on cannabis. They are as follows:

Actinovate SP
Agrotek Ascend Vaporized Sulphur
Bio-Ceres G WP
Bioprotec Caf
Bioprotec Plus
Botanigard 22 WP
Botanigard ES
Cyclone
Doktor Doom Formula 420 Professional Use 3-in-1
Influence LC
Kopa Insecticidal Soap

Lacto-San
MilStop Foliar Fungicide
Neudosan Commercial
Opal Insecticidal Soap
Prestop
Purespray green spray oil 13E
Rootshield(R) WP Biological Fungicide
Rootshield HC Biological Fungicide Wettable Powder
Sirocco
Vegol Crop Oil

Licensed producers are required to have adequate controls within their facility to ensure that unauthorized pest control products are not used. These controls may include, but are not limited to, restricting access to pest control products, monitoring the application of products to fresh or dried cannabis, cannabis plants or seeds, or testing for unauthorized pesticide use. Atlantic Cultivation will regularly review and implement an integrated pest management program as part of their Good Production Practices. Pesticides Control Regulations control the sale, handling, use, and disposal of pesticides.

4.3.7 Natural Resource Exploitation

Currently, natural resources, such as water and soil, are greatly over-exploited worldwide. Only their sustainable use will secure the foundations of life for future generations.

Natural resources such as land, air, water, biodiversity and soil are the foundations of life. They ensure our current quality of life but are heavily over-exploited. This is because our economy is configured to operate on a growth basis; as a result, resource consumption increased eightfold during the 20th century. The fact that natural resources are finite and exist only in limited supplies and that the current use of natural resources by the economy and society exceeds their capacity to regenerate continues to be disregarded.

Atlantic Cultivation is committed to operating with sustainable conservation practices to ensure local and national natural resources are not taken advantage of.

4.4 Operations

Atlantic Cultivation's facility with be fully compliant with the ACMPR, the NCA, the CDSA and any relevant municipal and provincial regulations. The growing operations of the cannabis facility will take place in 30 flowering rooms, 2 mother rooms and 1 propagation room. Each room will be monitored with sophisticated and refined environmental controls that monitor environment, lighting, nutrient management and watering. Ancillary and processing operations will be logged and controlled through the comprehensive Ample Organic record keeping software system.

The plants will be grown aeroponically, using a hydroponic system. Aeroponics are a specialized version of hydroponics where the roots of the plant extend only in air and the roots are directly sprayed with a nutrient water mix. The primary difference is the availability of oxygen to the roots. In hydroponics, one has to be sure to supply oxygenated water. Standing water is depleted of oxygen over time. In aeroponics, oxygen is surrounding the roots at all times. Surplus oxygen accelerates nutrient absorption at the root surface.

Plant support in both aeroponics and hydroponics are provided by the hosting environment. Hydroponic plants tend to be stabilized with hydroton clay balls or coco-coir soil alternatives and flooded or submerged in water. Nutrients for hydroponics are provided in solution in the water. For aeroponics, the roots dangle directly in the air and the nutrient salts are mixed with water and sprayed as a vapor directly onto the roots. This completely eliminates mechanical resistance. Roots can grow and expand their surface area at will.

Atlantic Cultivation has gathered information from a series of industry consultants that have experience in several similar cannabis production facilities across Canada. This experience has allowed the company to develop Standard Operating Procedures (SOPs) to ensure a high-quality production process with consistent results. The Mount Pearl facility will be GAP/GMP (Good Agricultural Practices/ Good Manufacturing Practices) certified**.**

4.5 Labour Relations & Occupations

Atlantic Cultivations proposed facility is expected to create approximately 103 positions in the local area starting with construction. Atlantic Cultivation will be focusing its efforts in hiring local labour, suppliers and contractors.

Atlantic Cultivation is committed to employment equity relative to age and gender. Hiring practices will be in general conformance with the Atlantic Canada Employers Guide to Gender Diversity in Employment.

LABOUR CREATION			
OCCUPATION	NOC 2016	NUMBER OF POSITIONS	LENGTH OF EMPLOYMENT
INITIAL YEAR LABOR BREAKDOWN			
Chief Executive Officer	0016	1	Full Time Permanent
Chief Operations Officer	1221	1	
Chief Financial Officer	0016	1	
Accounts Manager	0601	1	
Human Resources Manager	0112	1	
Quality Assurance Director Lead	2233	1	
Quality Assurance Person Secondary	2233	2	
Administrative Assistant Lead	1241	1	
Administrative Assistant Secondary	1243	1	
Director of Cultivation (Master Grower)	0822	1	
Cultivation Manager	2123	2	
Cultivation Technician	2225	12	
Propagation Technician	8432	5	
Director of Processing and Extraction	2211	1	
Processing and Extraction Technician	9232	10	
Director of Packaging and Distribution	0731	1	
Packaging and Distribution Associates	1521	10	
Maintenance Technician	0714	4	
Director of Sales and Marketing (Dispensary, Inside Sales, Marketing, Online Retail)	0124	1	
Manager of Dispensary	0621	4	
Sales Associate – Inside Sales	6421	2	
Dispensary Associates	6421	16	
Marketing and Advertising Associate	0124	2	

5.0 Approvals

The following is a list of permits, licenses, approvals and authorizations that may be required to enable the undertaking:

REQUIRED APPROVALS		
AUTHORIZATION	**LEGISLATION**	**REGULATOR**
Project Registration	- NL Environmental Protection Act - Environmental Assessment Regulations	NL Department of Municipal Affairs and Environment
Storm Water & Waste Water Management	- Water Resources Act - Environmental Control Water and Sewage Regulations - Nutrient Management Act	
Petroleum Storage	- NL Environmental Protection Act - Storage and Handling of Gasoline and Associated Products Regulations	
ACMPR Application Approval	- Access to Cannabis for Medical Purposes Regulations - Cannabis Act / Cannabis Regulations	Health Canada
Site Planning & Building Permits	- Mount Pearl Municipal Site Planning Approval Regulations	Mount Pearl Municipal Planning Department
Electrical Safety Authority	- NL Electrical Regulations under the Public Safety Act	Service NL
Utility Service Upgrades	- Various	

6.0 Construction Scheduling

A construction schedule can be found in APPENDIX 4.

7.0 Funding

Atlantic Cultivation Ltd. is a privately-owned company, and its current project will be funded by private investment groups throughout Canada. The capital costs to complete the undertaking is estimated at $47,800,000.00 to build, upgrade and sustain operations and working capital for the 2019 production season.

APPENDIX 1

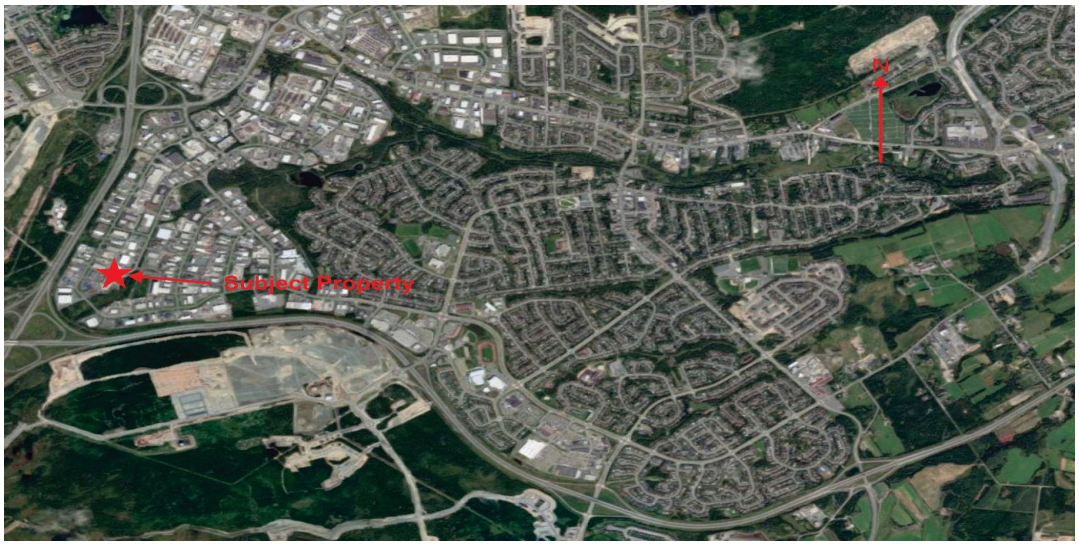
Land Survey, Site Plan, Property Description and Zoning

Industrial Building & Excess Land

138-142 Clyde Avenue & 135 Glencoe Drive, Mount Pearl, NL

Property Description - Site Description	
Configuration	Irregular
Services	Full municipal services
Site Coverage	3.20% (Assuming a site size of 0.97 ac for the subject property results in a site coverage ratio of 20%)
Site Density	3.20% (Assuming a site size of 0.97 ac for the subject property results in a site density of 20%)
Ingress / Egress	The site is accessible from Clyde Avenue and Glencoe Drive with gated entrances on either side of the property.
Parking	There is a gravel parking area at the northern boundary of the property.
Truck Turning	There is ample room for truck turning.
Site Improvements	There is a fence along the border of the property with a gated entrance at Glencoe Drive and an entrance along Clyde Avenue.
Special Features	There is a 739 sf Quonset hut on the north western property boundary near the midpoint of the property.
Legal and Title Limitations	A full search and interpretation of the title are beyond the scope of this appraisal and the report is based on the assumption that there are no material encumbrances that would affect value unless otherwise noted. However, as encumbrances can have a significant impact on the market value and / or marketability, legal advice should be obtained if this assumption is required to be verified.
Encumbrances	Based on review of the survey plans and legal descriptions, there are no encumbrances noted.

Municipal Map



Source: Google Maps

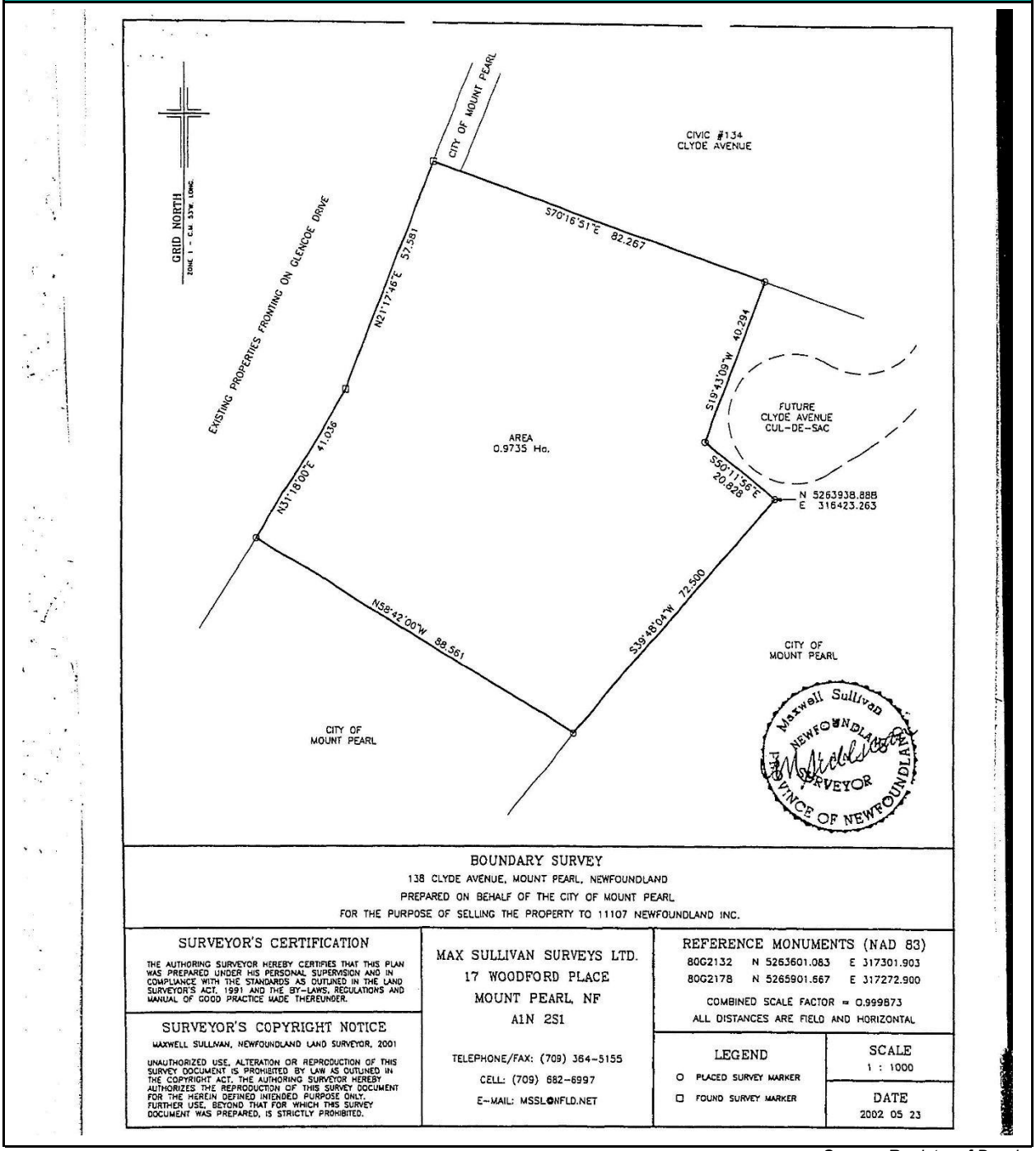
Property Description – Land Use Controls - Industrial - Light	
Policy Plan Type	Municipal Plan - Mount Pearl Development Regulations
Zoning / Land Use	Industrial - Light (IL)
Permitted Uses	Amusement use, auction house, automotive sales, bakery, car wash, commercial garage, commercial school, communications, drive-through use, dry cleaners, furniture and appliance showroom, gas bar, group fitness, health club, laundromat, movie production studio, office, outdoor commercial patio, parking lot, restaurant, retail warehouse, self-storage storage mall, service station, shop, take-out food service, taxi stand, transportation terminal, vehicle or trailer for vending or office purposes, light industry, shop use in association with light industrial use, park, recreational use, civic use, open air assembly use, antenna
Discretionary / Accessory Uses	Adult day care use, animal grooming, bar, beehive, clinic, cultural centre, general assembly, general industry use, group child care use, hazardous industry use, indoor assembly, indoor firearms shooting range, kennel, lounge, nightclub, outdoor assembly use, personal service, place of worship, school, significant telecommunications structure, transportation, veterinary clinic
Permitted Height	49 ft maximum. Potential maximum building height is 79 ft, subject to approval.
Parking Requirements	Not applicable
Site Specific By-Law	Not applicable
Excess Density / Expansion Potential	Typically, similar industrial properties within the area are built with site coverage of approximately 20% to allow for ample parking and laydown area. Based on this there is some 5.10 ac of excess land located at the southern portion of the site along the Glencoe Drive frontage which could be subdivided and sold separately or developed alongside existing improvements.

Zoning / Land Use

Source: City of Mount Pearl GIS Mapping

Survey Plan

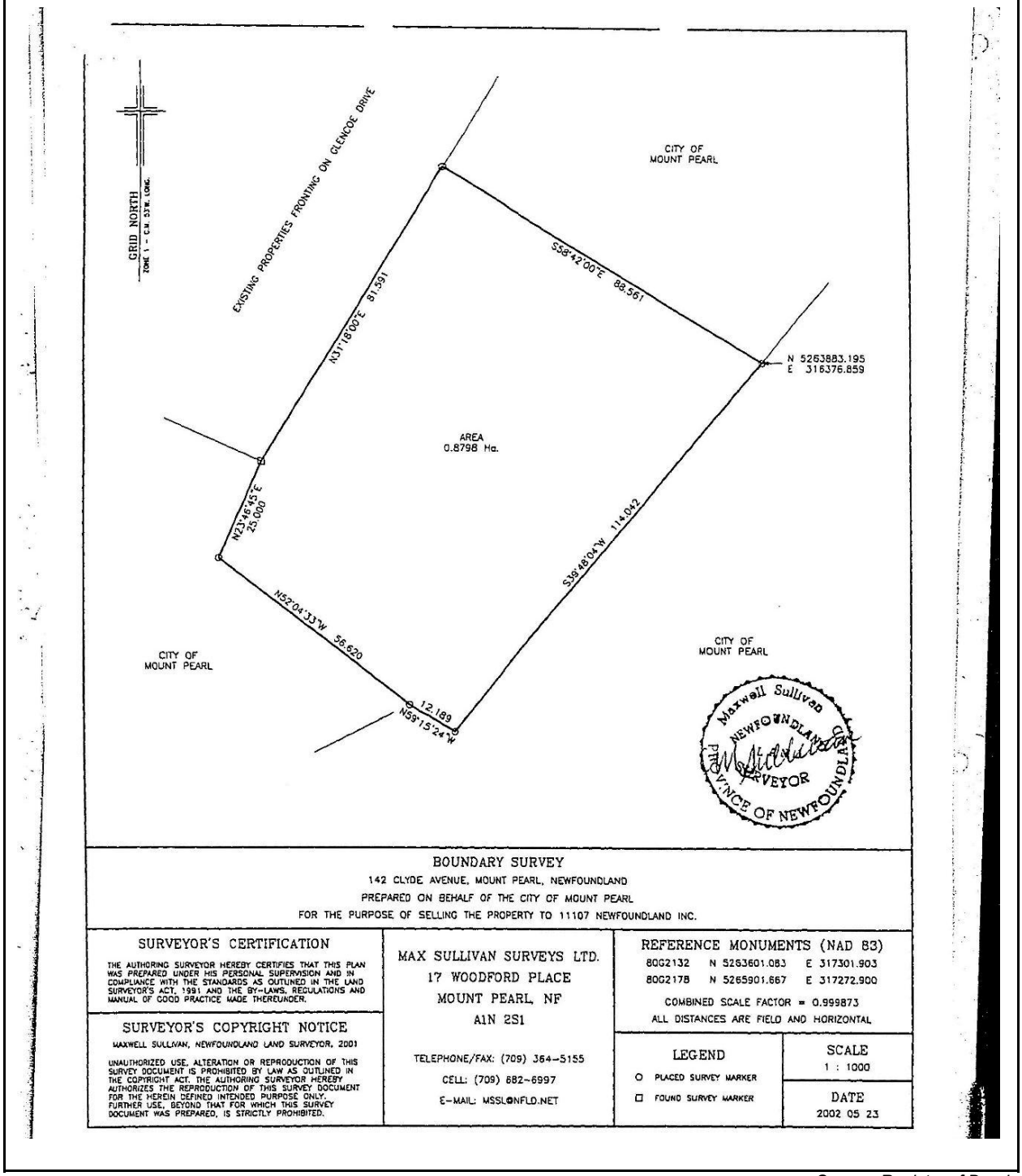
Site Survey / Plan – 138 Clyde Avenue



Source: Registry of Deeds

Survey Plan

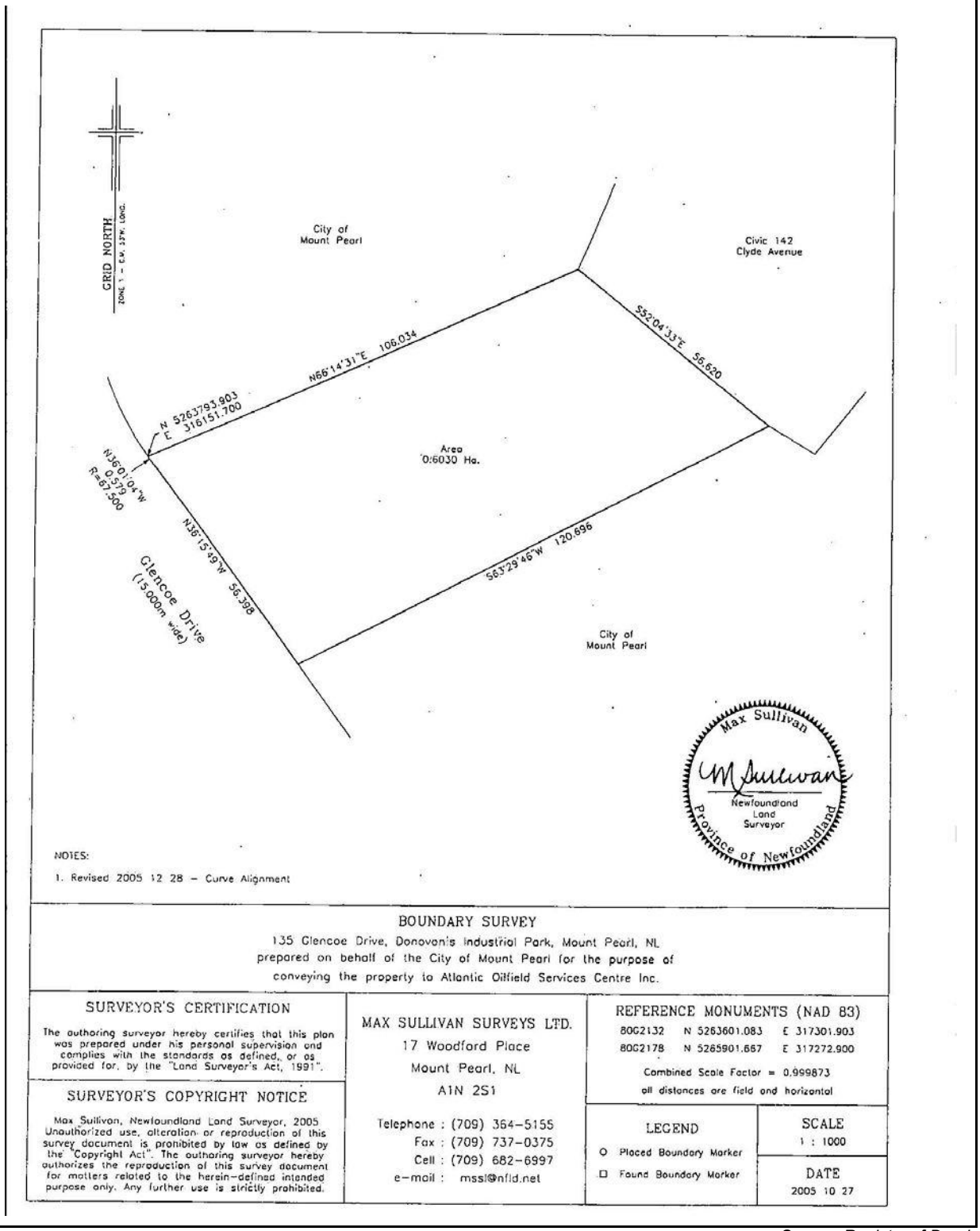
Site Survey / Plan – 142 Clyde Avenue



Source: Registry of Deeds

Survey Plan

Site Survey / Plan – 135 Glencoe Drive



Source: Registry of Deeds

Photographs of Subject Property

Laydown area

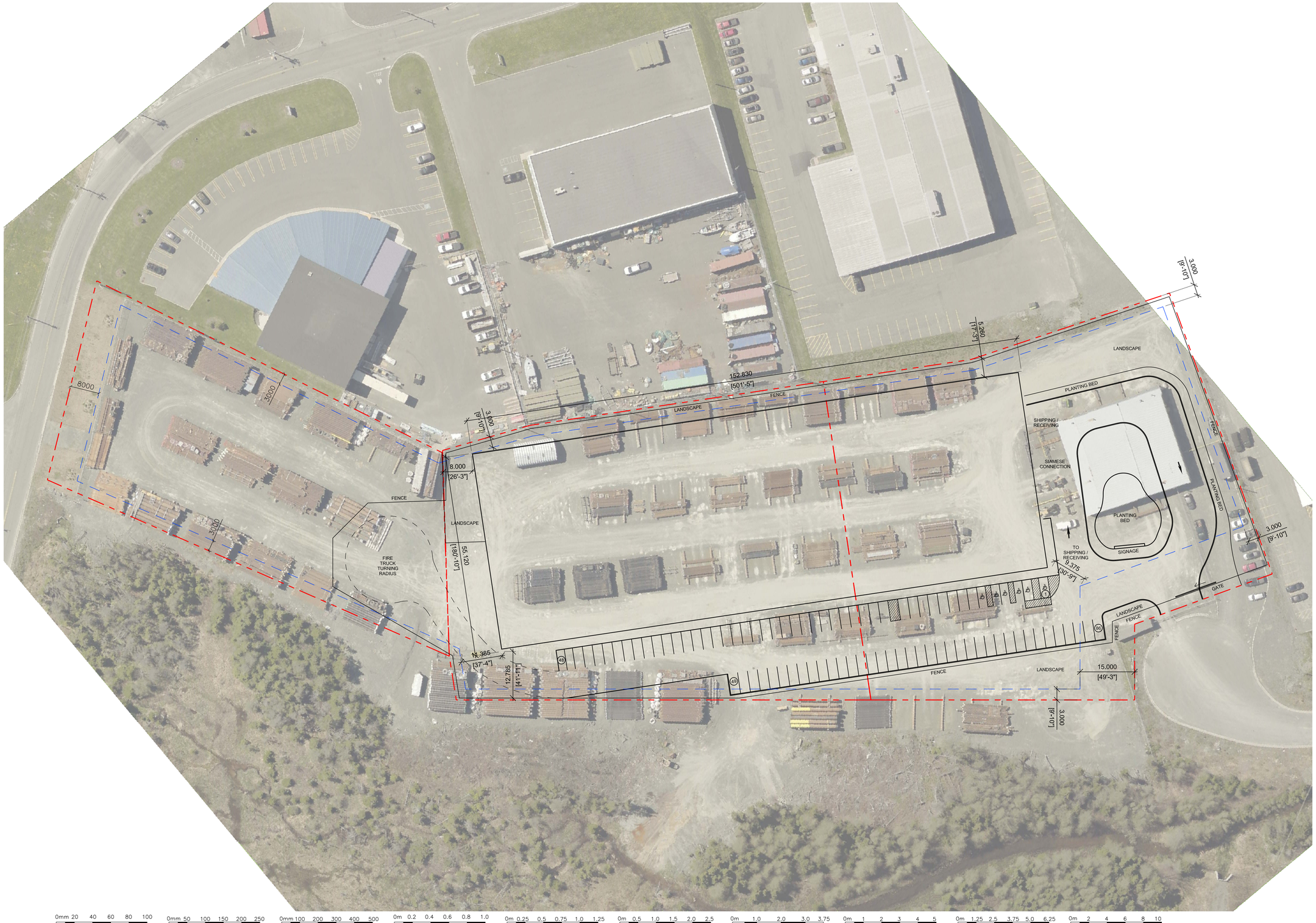
Existing building and Fence

Clyde Ave, facing south

Clyde Ave, facing north


124
120
116
126
Glencoe Dr
129
135
119-123
117
142
138
Clyde Ave
134
153
157
46
127
esri

Aerial View.



Architect: Prime Consultant

FOUGERE MENCHENTON ARCHITECTURE

Discipline: ARCHITECTURAL

Sub-Consultant : Structural

Sub-Consultant : Mechanical & Electrical

Sub-Consultant : Mechanical & Electrical

Sub-Consultant : Civil

Client:

Drawn	Checked
S.H. , R.M.	R.M.
Designed	**Approved**
R.M.	R.M.

Consultant's Project No.: 2017-96

Professional Stamp & Permit

FOR DISCUSSION ONLY

Notes:

1. DO NOT SCALE FROM THIS DRAWING
2. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN MILLIMETRES.
3. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS ON SITE PRIOR TO PROCEEDING WITH ANY PORTION OF THIS WORK.
4. CONTRACTOR SHALL DO ALL WORK IN ACCORDANCE WITH THE APPLICABLE STANDARDS AND CODES INCLUDING, BUT NOT LIMITED TO , THE NATIONAL BUILDING CODE OF CANADA, CURRENT EDITION.

No.	Revisions	MM/DD/YY
3	Issued for Meeting	11/20/18
2	Issued for Review	11/06/18
1	Issued for Review	10/25/18

Drawing Nomenclature

Detail/Section No. → 3 / A-1 ← Dwg. No. where detailed

Project Title

PROPOSED ATLANTIC CULTIVATION FACILITY

138-142 Clyde Ave., Mount Pearl
Newfoundland Labrador

Client's Project No.:

DRAWING TITLE

CONCEPT SITE PLAN

SCALE	DRAWING NO.
1 : 500	A-1.1
DATE: JAN 2018	
REVISION NO.: 1	

APPENDIX 2

Doc #:	Title: **Cannabis Waste Handling Process & Destruction Method SOP**	Date Created: **01/02/2018**
Rev #:	Prepared For: **Atlantic Cultivation**	Date Revised:
Rev #:	Prepared By: **Fox D Consulting Inc.** Verified By: **Robert Needle**	Date Revised:

ATLANTIC CULTIVATION

CANNABIS WASTE HANDLING PROCESS & DESTRUCTION METHOD SOP

Policy: Atlantic Cultivation requires that all waste will be collected on a daily basis and disposed of in the dedicated cannabis waste area. Atlantic Cultivation ensures that destruction of all controlled substance materials is rendered unfit for use or consumption.

Purpose: To follow the regulations of the ACMPR regarding cannabis waste as part of Division 3 and Health Canada's Directive of secured compliant space. This procedure provides information and guidance for the correct and safe destruction procedure.

Scope: This procedure covers all forms of the cannabis plant and waste disposal protocols for cannabis present areas.

Responsibility: It is the PICs responsibility to remove all garbage from cannabis present areas and to approve and supervise cannabis destruction. A minimum of two people must witness the destruction one of whom must be a PIC.

Procedure(s):

1.0 General

1.1 All controlled cannabis waste must be mechanically ground and then denatured by adding bentonite clay (kitty litter) and water. This mixture will be mixed until all cannabis has been sufficiently denatured. The denatured waste will be disposed of with regular waste outside in the facility dumpster.

1.2 Each instance of disposal will be completed in the presence of a CCTV camera and witnessed by two designated individuals one of whom must be a PIC who will be responsible for ensuring that the weighing and documentation processes are followed, as outlined below.

1.3 Stems and stalks that are not controlled and can be disposed of without destruction. Stems and stalk will be disposed directly into the facility dumpster.

1.4 All product at the end of the day will be transferred and accompanied by at least one PIC and another employee to the secured destruction area.

1.5 Controlled products will be mixed with an approximate 50/50 ratio of kitty litter. Water will vary according to denaturing consistency.

1.6 All products are stored separately, weighed and documented prior to being combined for destruction. Ex. leaves, dried product, root balls, flowers etc.

1.7 Weigh and document the collected cannabis waste on the *Ample Organics* software system. Identify and label all waste containers.

1.8 All controlled product must be weighed, labeled and documented in the *Ample Organics* software.

2.0 Handling Responsibility

2.1 A PIC is responsible for removing all garbage in cannabis present areas. They must ensure that a full thorough inspection is conducted to ensure controlled and non-controlled substances are accurately separated. This will also ensure that no employee is attempting to dispose of cannabis in a non-controlled receptacle with the intent of retrieving it later.

2.2 Every garbage container throughout the facility will be equipped with only clear bags to ensure the contents can be visually inspected.

3.0 Documentation

3.1 Each PIC who approves cannabis for destruction will be responsible for observing the destruction process, weighing the cannabis and creating all records to ensure each amount is accounted for.

3.2 These records will be kept in our software and stored for a period of no less than (2) years. The records will be easily accessible for monthly reporting and when Health Canada requests it.

3.3 A destruction record and witness log will be stored within the *Ample Organics* system immediately.

3.4 In the event that manual documentation is required the *Cannabis Waste Disposal Form* may be used.

4.0 Requirements of Cannabis Waste Collection & Management

4.1 A PIC must ensure that all waste cannabis material meeting the definition of a controlled substance, is taken directly to the secured destruction area and denatured via a Health Canada-approved method.

4.2 All controlled cannabis waste must be destroyed in the presence of at least two (2) authorized individuals that are approved under section 20 of the ACMPR to witness the destruction of cannabis waste.

4.3 Ensure that all cannabis and cannabis waste product is only handled, moved, denatured or destroyed by those who are required to do so as part of their job duties.

4.4 Ensure that any and all irregularities related to cannabis and cannabis waste are immediately reported to a PIC.

5.0 Collection & Management of Non-Controlled Waste

5.1 All non-controlled waste from secured areas must be inspected by a PIC prior to being removed from the facility for disposal.

5.2 Municipal garbage is collected at least once per week.

6.0 Corrective Action

6.1 In the event of any issue related to the security of dried cannabis and cannabis waste handling procedures it must be recorded on the NUOCA log. A supervisor/PIC and a security team member will be notified immediately.

7.0 Management Review

7.1 In view of the potential serious nature of the security of dried cannabis and the cannabis waste handling process, and the fact that it should be a rare occurrence, any related issues and corrective actions are reviewed at the next convened cannabis safety committee meeting in order to ensure that the corrective and preventive actions were adequate.

APPENDIX 3

Mechanical Design Description

1. MECHANICAL SYSTEMS DESIGN DESCRIPTION

1.1 HVAC Systems – Administration

It is expected that HVAC equipment will be placed into operation to ventilate, cool and heat the administrative area. Ducting, cleaning and testing is included.

1.2 HVAC Systems – Production: Dry, Trim, Packaging and QA/QC lab

The design includes fancoil air handlers. The units are chilled water and hot water for precise humidity control flexibility and include high efficiency filter banks including pre-filter, mid efficiency filters and post filters. This filter bank will filter different size particles and reduce the frequency of filter replacement. The HVAC equipment includes flexibility to accommodate a range of Heating, Cooling and Dehumidifying modes. Air changes per hour will be augmented with fan system to obtain desired Air Changes per hour between 12 and 20.

The Dry Room unit is assumed to be a 7 day cycle and include humidification and heating capability.
The design includes for each room to have a dedicated HVAC system to mitigate potential cross contamination. The design includes 8 pieces of air handling equipment. The design assumes it will be mounted on the floor or on a newly constructed platform immediately above a room.
A Building Management Systems for temperature and Humidity control is included for each room and system equipment.

1.3 Central Chilled Water / Hot Water Plant

The OPC assumes a four pipe central plant to serve the fan coils and air handlers.
Cooling plant size is estimated as 120 tons and is divided into two 60 ton air cooled chillers located in the side yard. A single 120 ton flat bed cooler is also included in the side yard to reduce energy consumption when outdoor air temperature is below switch over point. This also provides a second level of redundancy in addition to the chillers.

The heating source is estimate to be a 150 MBH, two condensing boiler plant located in a service area.
Duty/Standby primary pumps for cooling system and Duty/Standby pumps for heating system (total of 4 pumps) are assumed to be base mounted and located in the service area.
A Building Management Systems for temperature and energy management is included and all equipment is networked and available for monitoring and control by password authorized operators from any mobile or network device.

1.4 Plumbing

The documents regarding the sanitary system will follow building codes. The documents indicate underground sanitary and storm to grade.
New floor drains are included to be installed in each wet operation room to allow cleaning. Hub drains to HVAC equipment for condensate collection and removal are included for each piece of HVAC equipment.
Administration Plumbing fixtures are expected to be new.

1.5 Other

Shipping receiving includes Gas fired unit heaters at the shipping door, Air conditioning in the offices, Exhaust fans in the storage rooms.
Vault includes a 3 ton dedicated ductless spit system, condensate drainage and condensing unit.
Natural gas system piping distribution rework to serve new equipment and to serve the emergency generator.

APPENDIX 4

Appendix 9.A: Construction Milestones and Deadlines

	Milestone	Deadline
1	Complete Transaction of purchase of land in North East Avalon, NL where the production facility is to be built.	Negotiated
2	Application for federal and provincial production/distribution/sales licenses (including for greater clarity, the production license under the federal *Cannabis Act* and licences from NLC)	*Federal Production License Application* – Submitted and currently in the Review and Security Clearance Stage. *Provincial Retail Licenses* – TBD by the Provincial Government of Newfoundland and Labrador.
3	Receipt and continued maintenance of provincial distribution/sales license	TBD by Provincial Government of Newfoundland and Labrador and the NLC.
4	Environmental assessment: a. Application for final environmental assessment from the Province; and b. Receipt of final environmental assessment from the Province	a. environmental assessment application to be submitted prior to or on December 31, 2018. b. environmental assessment receipt expected prior to or on Feb 15, 2019
5	Completion of design of Production Facility	March 31, 2019
6	Commencement of construction of the Production Facility, including full mobilization of the construction site.	April 2019
7	Progress monitoring of construction of the Production Facility; a. 50% completion (based on progress of construction of the Production Facility); b. Substantial Completion; and c. Final completion and commissioning of the Production Facility	a. Fall 2019 b. Summer 2020 c. Fall 2020
8	Health Canada inspection	Fall 2020
9	Receipt and maintenance of license form Health Canada at least in respect of production, sale/provision, possession, shipping, transportation, delivery and destruction of dried marijuana, cannabis oil, marijuana plants and marijuana seeds. In particular, the federal license shall be in accordance with the federal Cannabis Act and for production of non-medical cannabis in a category appropriate for the expected size of the Production Facility and required minimum production once the Production Facility completed and is operational.	Fall 2021
10	Annualized production of at least 6,000 kg (or Equivalent) of Cannabis at the Production Facility	Year end 2021
11	Annualized production of at least 8,000 kg (or Equivalent) of Cannabis at the Production Facility	Year end 2022
12	Annualized production of at least 12,000 kg (or Equivalent) of Cannabis at the Production Facility	Year end 2023
13	Annualized production of at least 16,000 kg (or Equivalent) of Cannabis at the Production Facility	Year end 2024