

Minister of Environment and Climate Change
PO Box 8700
St. John's, NL – A1B 4J6
Attention: Director of Environmental Assessment

REGISTRATION DOCUMENT

1. Name of Undertaking: 71113355 – Ball Ridge, Musgrave Harbour, NL

2. Proponent:

1. Name of Corporate Body: Coady Construction & Excavating Limited
2. Chief Executive Officer: Jerome Coady
3. Principle Contact Person for Purposes of EA: Sheryl Bruce – Manager

3. The Undertaking:

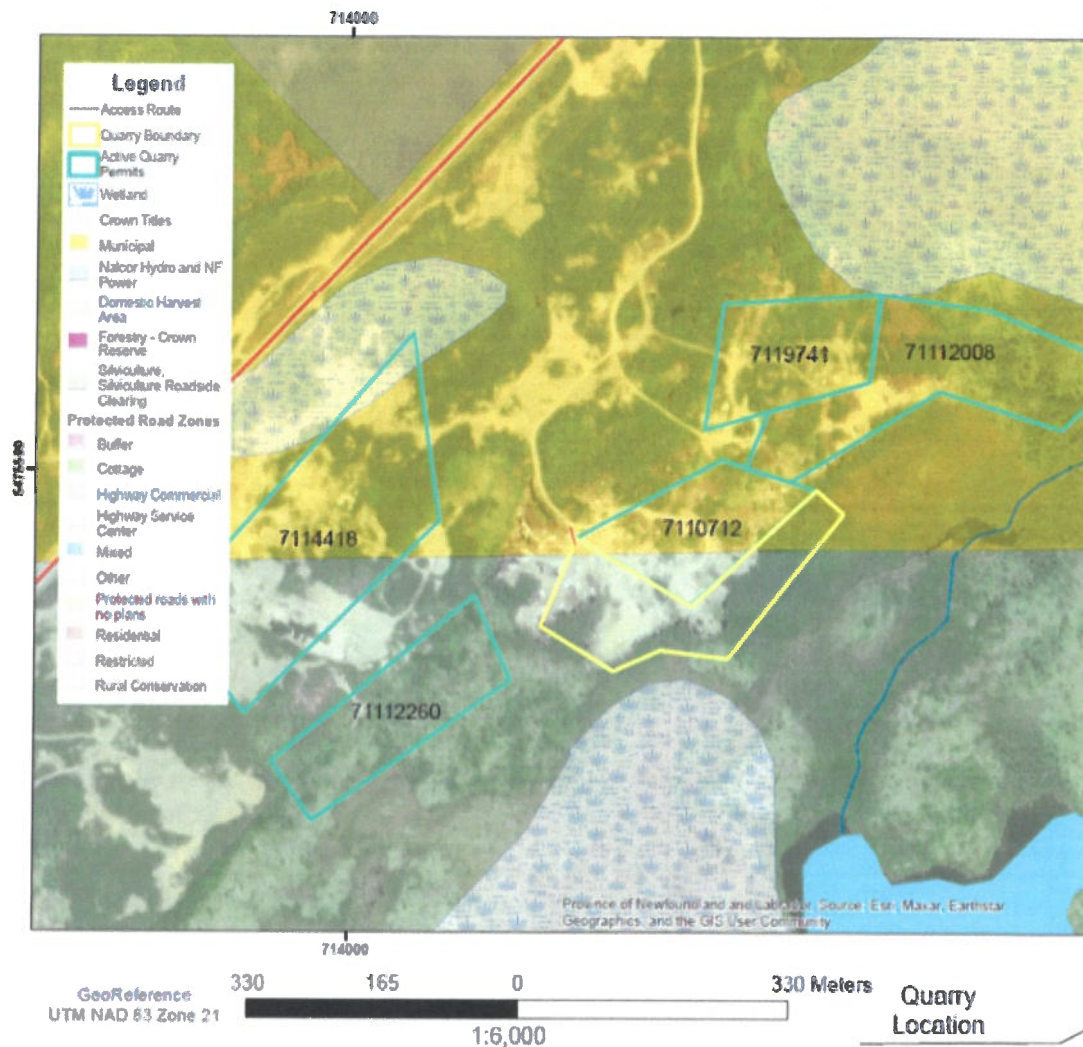
I. Name of the Undertaking – 71113355 – Ball Ridge, Musgrave Harbour, NL

II. Purpose of the Undertaking

The purpose of the Environmental Assessment for the Quarry Application 71113355 – Ball Ridge, Musgrave Harbour, NL is to evaluate the potential environmental impacts of the proposed quarry operations and determine necessary mitigation measures. This process ensures compliance with regulatory requirements and promotes sustainable development.

Quarry operations would involve the extraction of rock, armour stone, and pit run material from the designated area to support ongoing construction and infrastructure projects in the area. The extraction process will be carried out through the ripping and picking of field boulders, minimizing the need for blasting operations.

4. Description of the Undertaking



I. Geographical Location

Coady Construction & Excavation Limited have submitted a quarry application 71113355 for the development of a 2.4 Hectare quarry site located at Ball Ridge, Musgrave Harbour, NL.

The Quarry Location is: 49° 23' 33.15" N, 54° 02' 41.46" W

II. Physical Features

Musgrave Harbour experiences a humid continental climate with cool summers and cold, snowy winters. The region is influenced by the North Atlantic, leading to moderate temperatures, high humidity, and frequent high coastal winds. Precipitation is evenly distributed throughout the year, with significant snowfall during the winter months.

The landscape is characterized by gently rolling terrain, rocky outcrops, and coastal lowlands. The area features exposed bedrock, glacial deposits, and scattered boulders, indicative of past glacial activity. Inland, the terrain transitions into forested areas and wetlands, while the coastline consists of sandy beaches, cliffs, and small inlets.

Soils in the region are generally thin, rocky, and acidic, with limited fertility due to the underlying hard bedrock and glacial till. The presence of field boulders and exposed rock

formations makes the area suitable for quarrying activities.

Musgrave Harbour features a diverse coastal and boreal ecosystem influenced by a North Atlantic climate.

- **Flora:** the area is characterized by boreal forest vegetation, including black spruce, balsam fir, and white birch.
- **Fauna:** Terrestrial wildlife including moose, black bears, red foxes, and snowshoe hares.
- **Sensitive Habitats:** Wetlands and bogs provide important carbon storage and support amphibians, insects, and small mammals.

The air quality in the Ball Ridge area is generally good, influenced by its coastal location and natural vegetation, which helps disperse airborne particles. Given the presence of existing quarries in the area and the site's proximity to the highway (500m away), there are already some localized dust and emissions from quarrying and vehicle traffic.

The proposed 2.4 hectare quarry site at Ball Ridge, Musgrave Harbour is located in an area with existing quarry operations, indicating that the land is already designated for resource extraction. The site is approximately 500m from the existing highway, providing efficient transportation access. The quarry will comply with all municipal, provincial, and environmental regulations governing quarry operations, including permits for land use and resource extraction.

Musgrave Harbour is the nearest community, nearly 7 km away. There will be minimal concerns from residents given that the distance from the community and the pre-existing quarries in the area. This quarry is expected to have a low social impact, if any at all.

The quarry will create and sustain local employment opportunities, including positions for equipment operators, truck drivers, and site managers. It will contribute to the local and regional construction and infrastructure sectors which will increase business for local suppliers and service providers.

5. Construction & Operation

I. Land Disturbance & Erosion

The extraction of field boulders will cause minimal soil disturbance compared to traditional quarrying methods that involve heavy drilling or blasting. The natural removal of boulders may alter surface drainage patterns, potentially increasing localized erosion if not managed properly. The site's proximity to the coastline and existing road networks reduces the need for extensive land clearing, helping to preserve surrounding vegetation that naturally prevents erosion.

II. Water Pollution & Management

Potential Contamination of Surface & Groundwater:

- Quarrying activities at Ball Ridge may lead to sediment runoff, especially during periods of heavy rainfall.
- The movement of boulders and soil could result in suspended solids entering nearby

water bodies, potentially affecting water quality. There is a minor risk of contamination from fuel and oil spills due to equipment operation.

- Proper handling and maintenance of machinery will be crucial to minimize these risks.
- The extraction method of ripping and picking field boulders is less intrusive compared to traditional quarrying, reducing the risk of significant changes to groundwater flow and contamination.

To minimize sedimentation in water bodies, the following sediment control measures will be implemented:

- Silt fences and sediment traps around the perimeter of the excavation area to capture suspended particles before they can enter water sources.
- Erosion control blankets will be applied in areas with disturbed soil to prevent soil erosion and sediment runoff.
- Site grading will be done strategically to direct surface runoff away from nearby water bodies and sensitive areas.
- Buffer zones of vegetation will be maintained around water sources to further reduce sediment transport.

Spill Response and Prevention:

- A spill response plan will be in place to manage accidental fuel or oil spills, including the use of absorbent materials and immediate containment measures to prevent contamination of surrounding soil and water.

III. Air Quality & Dust Control

The primary environmental factors affecting air quality at the Ball Ridge Quarry are dust generation and emissions from equipment. Given the nature of the extraction method (ripping and picking field boulders), dust is expected to be a key consideration. The following factors need to be addressed:

A. Dust from Excavation and Transport Activities:

- Field boulder extraction and the movement of materials will generate dust, particularly during dry conditions.
- The transportation of materials via trucks on unpaved roads could further contribute to airborne particulate matter.
- Wind erosion of stockpiled material and disturbed soil areas may also increase dust levels in the vicinity.

B. Equipment Emissions:

- Diesel-powered equipment used for excavation and transport may produce exhaust emissions, contributing to air quality concerns. Although emissions are generally limited to localized areas, they should be minimized through the use of well-maintained, efficient machinery.

C. Dust Control Measures:

To minimize dust and ensure compliance with air quality standards, the following dust control strategies will be implemented:

1. Watering of Roads and Excavation Areas:

- Regular watering of unpaved roads and active work areas will be conducted to keep dust levels under control, especially during dry periods.
- A water truck will be employed to dampen surfaces and prevent dust from becoming airborne.

2. Dust Suppressants:

- Dust suppressants such as non-toxic, biodegradable products will be used on roads, stockpiles, and disturbed areas to minimize airborne particulate matter.

3. Windbreaks and Buffer Zones:

- Where feasible, the establishment of windbreaks (e.g., using trees or other vegetation) will be considered around the site to reduce dust dispersion into surrounding areas.
- Vegetation buffers will be maintained around the quarry site to reduce the spread of dust to nearby sensitive areas.

4. Proper Equipment Maintenance:

- Regular maintenance of machinery will be ensured to reduce emissions and improve fuel efficiency, minimizing the release of pollutants into the air.

5. Operational Adjustments:

- Dust-generating activities may be scheduled during times of lower wind to minimize the dispersion of dust.
- If necessary, the operation hours may be adjusted to reduce dust exposure to nearby communities.

IV. Noise & Vibration Impacts

The Ball Ridge Quarry may generate noise and vibrations primarily from the following activities:

1. **Excavation and Extraction:** The use of heavy machinery (e.g., excavators, bulldozers) for ripping and picking field boulders will create localized noise. However, since blasting will not be required, noise levels are expected to be lower compared to more intensive quarrying methods.
2. **Transportation:** Truck traffic on access roads and the transportation of extracted materials may contribute to noise, particularly if haul roads are unpaved.
3. **Equipment Maintenance:** Proper maintenance of machinery will ensure operational noise will be kept to a minimum.

Noise Mitigation Measures:

To minimize noise impacts on the surrounding area, the following mitigation strategies will be

implemented:

1. **Operational Hours:** Restricted working hours (e.g., 7 AM to 7 PM) will be adhered to in order to avoid disturbance during the nighttime hours when noise is more likely to be disruptive.
2. **Equipment Noise Control:** All equipment will be maintained in good condition to reduce noise output. Sound-dampening devices will be installed on machinery where applicable.
3. **Noise Barriers:** Where feasible, natural barriers (e.g., trees or berms) will be used around the quarry perimeter to reduce noise propagation to nearby communities and sensitive areas.
4. **Haul Road Management:** Speed limits will be enforced on haul roads to minimize noise from truck traffic. Additionally, roads will be regularly maintained to reduce noise caused by vehicle tires on rough or unpaved surfaces.

V. Biodiversity Conservation

The Ball Ridge Quarry is located in an area with a diverse boreal forest and coastal ecosystem, which supports a variety of plant and animal species. While the extraction process will focus on field boulders and minimal land disturbance, the following impacts may arise:

1. **Habitat Disturbance:** The removal of rocks and boulders, along with the development of access roads and the excavation process, may temporarily disturb local habitats, particularly for small mammals, birds, and insects. Disturbed areas could impact vegetation communities, especially in wetlands or coastal zones that are crucial for biodiversity.
2. **Fragmentation of Habitats:** The creation of access roads and extraction areas may lead to the fragmentation of habitats, affecting wildlife movement and access to food, shelter, and breeding grounds. Fragmented habitats can be especially problematic for species with limited mobility or specific habitat requirements.

Mitigation Measures for Biodiversity Conservation:

1. **Wildlife Monitoring:** A wildlife monitoring program will be established to track species present on-site and evaluate any changes in biodiversity due to quarry activities. Special attention will be paid to sensitive species and any critical breeding or nesting times.
2. **Protection of Sensitive Habitats:** Active extraction will be kept at least 50 meters from water sources and key ecological areas to limit habitat degradation.
3. **Timing of Operations:** Quarry operations will be adjusted to avoid sensitive times, such as the breeding season of migratory birds or other wildlife. If required, activities near sensitive areas will be temporarily halted during critical periods to reduce disturbances.
4. **Vegetation Restoration:** Special attention will be paid to restoring native species to enhance biodiversity and help sustain local ecosystems.
5. **Minimizing Habitat Fragmentation:** The Quarry layout and road construction will aim to reduce the fragmentation of habitats by clustering activities in a smaller area and

avoiding significant disturbance to wildlife corridors.

VI. Waste Management

Types of Waste Generated:

1. **Overburden and Excavated Material:** The extraction of field boulders and rock materials will generate overburden (soil, rock, and other materials removed to access the resource). This material, if not managed properly, could contribute to environmental degradation, especially if left exposed or mismanaged.
2. **Waste Rock:** Waste rock or material unsuitable for the intended use (e.g., not suitable for armour stone) will be generated during the extraction process.
3. **Construction and Operational Waste:** Packaging waste from supplies, machinery maintenance waste (e.g., used oils, filters), and any other general construction debris may be produced. Waste from fuel and oil spills could occur during equipment operation, requiring special handling.
4. **Domestic Waste:** Waste generated from the quarry operations, including from workers on-site (e.g., food packaging, bottles, cans), will need to be managed to avoid contamination or littering.

Waste Management Practices:

1. **Overburden and Waste Rock Management:** Stockpiles of overburden and waste rock will be located in designated areas to prevent runoff and minimize exposure to the elements. Overburden will be stored in ways that allow for future revegetation and reclamation. Recycling of waste rock for use in other construction projects or as backfill for non-active quarry areas will be explored to minimize waste and maximize resource utilization.
2. **Spill Containment and Waste Oil Disposal:** Proper spill containment systems will be in place to prevent contamination from fuel or oil spills during equipment operation. All vehicles and machinery will be regularly inspected and maintained to minimize the risk of leaks. Used oils, filters, and other hazardous materials will be disposed of at approved facilities, and a strict waste management plan will ensure proper handling and disposal.
3. **Recycling and Waste Reduction:** Wherever possible, recycling programs will be implemented for general operational waste, such as paper, plastic, and metal containers. These materials will be segregated and sent for proper recycling. Construction and demolition debris (e.g., packaging materials) will be recycled or disposed of in compliance with environmental standards.
4. **Domestic Waste Management:** On-site waste collection bins will be provided for workers, and all waste will be regularly removed from the site to avoid littering or contamination. Local disposal or recycling facilities will be used to ensure proper management of non-hazardous waste.
5. **Monitoring and Record Keeping:** A waste management plan will be developed, including tracking the amount and type of waste generated, disposal methods, and recycling efforts. Regular audits of waste management practices will ensure that

materials are disposed of or recycled according to best practices and regulatory standards.

Mitigation Measures for Waste Management:

- Implement a minimization approach to waste, focusing on reducing the amount of materials used, reusing materials where possible, and maximizing recycling efforts.
- Develop and adhere to a site-specific waste management protocol to ensure that all wastes are managed responsibly and in accordance with local and federal regulations.

By managing waste efficiently, Coady Construction can minimize its environmental impact while contributing to the sustainability of the Ball Ridge Quarry operations.

5. Mitigation Measures & Best Practices

I. Environmental Management Plan (EMP)

An Environmental Management Plan (EMP) is essential for ensuring that the Ball Ridge Quarry operates in an environmentally responsible manner while minimizing impacts on local ecosystems, communities, and resources. The EMP outlines the procedures, practices, and responsibilities that will be implemented to monitor and manage the environmental aspects of the quarry operations.

Objectives of the EMP:

- To identify, assess, and mitigate environmental risks and impacts associated with quarry activities.
- To ensure compliance with local, provincial, and federal environmental regulations.
- To monitor and manage environmental factors such as air quality, water quality, biodiversity, noise, and waste.
- To promote sustainable quarrying practices and environmental stewardship.

Key Components of the EMP:

1. Environmental Monitoring & Reporting:

- **Air Quality Monitoring:** Regular monitoring of dust levels and air quality around the quarry site to ensure compliance with environmental standards.
- **Water Quality Monitoring:** Ongoing testing of surface water and groundwater to track potential contamination risks and ensure proper water management.
- **Noise and Vibration Monitoring:** Continuous monitoring of noise and vibration levels to assess and minimize impacts on nearby communities and sensitive areas.
- **Biodiversity Monitoring:** Tracking of local flora and fauna, with a focus on identifying any disturbances to sensitive species and habitats.
- **Waste Management Tracking:** Regular reporting of waste generation, recycling, disposal methods, and efforts to reduce waste production.

2. Mitigation & Control Measures:

Dust Control: Use of water trucks, dust suppressants, and the establishment of buffer zones to control dust generation.

- **Noise Reduction:** Implementation of operational time restrictions, maintenance of equipment, and natural noise barriers (e.g., vegetation or berms).
- **Water Pollution Prevention:** Use of sediment controls, spill containment measures, and regular water quality assessments.
- **Habitat Protection:** Establishment of buffer zones around sensitive habitats and species, with particular attention to migratory birds and coastal ecosystems.
- **Waste Management Practices:** Effective handling and disposal of waste materials, including hazardous waste like oils and fuels, along with the recycling of construction debris.

3. Training & Awareness:

Employee Training: All employees and contractors will undergo training on the EMP and their role in minimizing environmental impacts. Training will cover waste management, spill response, dust control, and other relevant environmental practices.

- **Public Awareness:** Efforts will be made to keep the local community informed about quarry activities, potential environmental impacts, and the measures in place to minimize them.

4. Emergency Preparedness & Response:

Spill Response Plan: A plan will be in place for the immediate response to any fuel or oil spills, including containment and clean-up procedures.

- **Fire Control:** A fire response plan will be implemented to deal with potential fire risks from equipment or dry conditions.
- **Environmental Incidents:** A procedure for reporting and addressing environmental incidents will be established to ensure quick action is taken to prevent further damage.

The Environmental Management Plan will serve as the cornerstone for sustainable operations at the Ball Ridge Quarry, ensuring that the quarry minimizes its environmental impact while contributing to the region's economic development. Regular monitoring, strict adherence to mitigation measures, and a commitment to ongoing improvement will ensure that the quarry operates responsibly and meets the expectations of both regulatory authorities and the surrounding community.

Recommendations

The Ball Ridge Quarry application presents an opportunity to extract rock and armour stone with minimal environmental disturbance due to the use of ripping and picking methods, as opposed to more invasive techniques such as blasting. The proposed quarry site, located near Musgrave Harbour, will be subject to comprehensive environmental management practices to mitigate potential impacts.

- The air quality and noise impacts from the quarry are expected to be moderate, with dust control measures and noise reduction strategies such as equipment maintenance, operational

time restrictions, and the use of natural buffers to minimize disturbances.

- Water management strategies, including the installation of sediment controls and proper spill response measures, will reduce the risk of contamination of nearby surface and groundwater.
- Biodiversity conservation efforts will focus on protecting sensitive species and habitats through buffer zones, wildlife monitoring, and habitat restoration initiatives.

While the quarry will result in some localized disturbances, these will be effectively managed through the mitigation measures outlined, ensuring minimal impact on the environment and nearby communities.

Recommendations:

1. **Enhanced Monitoring Programs:** It is recommended that the quarry establish ongoing environmental monitoring programs to assess air quality, water quality, noise levels, and biodiversity throughout the life of the operation. This will help to ensure compliance with regulations and identify areas for improvement.
2. **Further Consultation with Local Communities:** Regular engagement with the Musgrave Harbour community is recommended to ensure local concerns regarding dust, noise, and traffic are addressed promptly. Continued transparency regarding operational schedules and mitigation efforts will help maintain positive community relations.
3. **Progressive Rehabilitation:** The implementation of progressive rehabilitation should begin early in the operation to minimize the duration of land disturbance. Restoring native vegetation and maintaining habitat connectivity will support the return of the area to a stable, productive state after quarry operations cease.
4. **Protection of Sensitive Species:** Given the proximity to coastal ecosystems and the potential presence of migratory birds, it is recommended that additional timing restrictions be implemented during sensitive breeding or migration periods to minimize disturbances to wildlife.
5. **Ongoing Equipment Maintenance and Efficiency:** Regular maintenance and operational efficiency of equipment should be prioritized to reduce both airborne emissions and noise levels from quarry activities.
6. **Long-Term Site Closure and Reclamation Plan:** A detailed closure and reclamation plan should be developed to ensure the site is restored to an acceptable state once extraction activities are completed. This plan should address not only the physical rehabilitation of the land but also the return of ecological functions and habitat for wildlife.

By implementing these recommendations, Coady Construction can minimize the environmental footprint of the Ball Ridge Quarry and ensure that its operations remain sustainable, compliant, and beneficial to both the local community and the surrounding natural environment.

II. Rehabilitation & Closure Plan

The Rehabilitation and Closure Plan outlines the steps that will be taken to restore the Ball Ridge Quarry site after the completion of extraction activities. The goal is to return the disturbed land to a condition that is stable, self-sustaining, and supportive of local ecosystems, while minimizing the long-term environmental impact.

Objectives of the Rehabilitation and Closure Plan:

- To restore disturbed areas to a stable, ecologically productive state, promoting the return of native vegetation and wildlife.
- To ensure that the quarry site is left in a condition that minimizes erosion and runoff risks and does not pose any environmental hazards.
- To provide a clear framework for the final closure of the site, including decommissioning of equipment and infrastructure, and post-closure monitoring.

Key Components of the Rehabilitation and Closure Plan:

1. **Progressive Rehabilitation:** As quarrying operations advance across the site, progressive rehabilitation will begin in areas where extraction is no longer active. Areas will be rehabilitated in phases to minimize the duration of land disturbance. Disturbed areas will be contoured to reduce erosion risks and then re-vegetated with native species. The goal is to ensure that each rehabilitated area is functional and integrated into the surrounding landscape as soon as possible.
2. **Revegetation and Habitat Restoration:** Native vegetation will be used for replanting and restoration efforts. The species selected will be those that are naturally found in the area and are suited to local soil and climatic conditions. The aim will be to restore both upland and coastal habitats, ensuring that disturbed areas are re-established as functioning ecosystems that support local wildlife.
3. **Soil Erosion Control:** Erosion control measures will be implemented to prevent soil loss from disturbed areas. This may include the use of silt fences, erosion control blankets, and vegetative cover to stabilize soil.
4. **Water Management:** After the completion of quarry operations, water drainage systems will be modified to ensure proper surface water management, allowing for controlled runoff and avoiding water contamination. Sediment traps and drainage swales will be established to manage and direct water flow, and to protect nearby watercourses from sedimentation.
5. **Decommissioning of Infrastructure:** All temporary infrastructure (e.g., roads, equipment) will be safely decommissioned and removed from the site. Equipment and machinery will be either sold, reused, or disposed of in an environmentally responsible manner. All hazardous materials (e.g., fuel tanks, oil containers) will be removed from the site and disposed of at licensed facilities.
6. **Long-Term Sustainability:** The final land use of the site will be determined based on the successful rehabilitation of the area. Potential future uses could include wildlife habitat, recreational areas, or conservation lands, depending on the needs of the surrounding community and the land's ecological recovery. Any land that is not suitable for immediate rehabilitation will be monitored and managed for gradual recovery over time.

Timeline for Rehabilitation and Closure:

- The rehabilitation process will begin progressively as quarrying operations advance. This ensures that the impacts of extraction are minimized, and areas are restored promptly.

- Final closure activities will begin after all extraction has been completed, with the entire site undergoing final rehabilitation over a period of 1-3 years, depending on the scale of disturbance and the specific requirements for habitat restoration.
- Post-closure monitoring will occur over a 5- to 10-year period, ensuring that the site's recovery is proceeding according to plan and that no ongoing environmental issues arise.

The Rehabilitation and Closure Plan for the Ball Ridge Quarry ensures that the quarry will leave behind a stable, restored landscape that can be utilized for future ecological or community purposes. Progressive rehabilitation and proper planning will minimize environmental impacts throughout the operational life of the quarry, providing a foundation for sustainable land management long after operations cease.

III. Occupations

Number of employees required to complete project: 10 Total

Duration of employment: All employees are full-time employees of Coady Construction & Excavating Limited. Coady Construction has no intention of laying off employees once project has been completed.

NOC Code	# of Employees
72014	2
73400	3
75110	2
73300	3

IV. Project Related Documents

See attached Specifications & Drawings for the "Shoreline Protection (Phase 2) – Musgrave Harbour, NL".

6. Approval of the Undertaking

See attached Specifications & Drawings for the "Shoreline Protection (Phase 2) – Musgrave Harbour, NL" to find additional approval information.

7. Construction Schedule

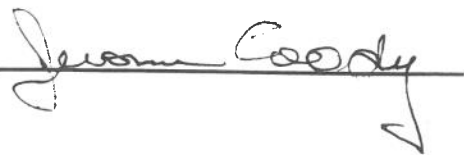
Work being completed for the "Shoreline Protection (Phase 2) – Musgrave Harbour, NL" is ongoing. Work will be ongoing for this project into July 2025 pending quarry approvals.

8. Capital Cost & Funding

The estimated cost to Coady Construction & Excavation Limited is approximately \$25,000.00 to develop this quarry.

DATE: May 1, 2025

SIGNATURE:

A handwritten signature in black ink, appearing to read "Jason Coady", is written over a horizontal line. The signature is cursive and stylized, with a large initial 'J' and a long, sweeping underline.