

**ENVIRONMENTAL ASSESSMENT  
REGISTRATION DOCUMENT  
MARYSTOWN MARINE  
INDUSTRIAL PARK DEVELOPMENT  
MARYSTOWN, NEWFOUNDLAND LABRADOR**

**ENVIRONMENTAL ASSESSMENT  
REGISTRATION DOCUMENT**

MARYSTOWN MARINE INDUSTRIAL PARK DEVELOPMENT

Prepared for:  
**Town of Marystown**  
Marystown, Newfoundland Labrador

Prepared by:  
**ADI Limited**  
St. John's, Newfoundland Labrador

Project No. 26-3941-036.1

**June 2008**

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- 1.0 NAME OF UNDERTAKING:** Marystown Marine Industrial Park Development
- 2.0 PROPONENT**
- 2.1 Name of Corporate Body** Town of Marystown
- 2.2 Address** P.O. Box 1118  
Marystown, NL  
A0E 2M0
- 2.3 Chief Executive Officer** Mr. Dennis Kelly - Town Manager  
P.O. Box 1118  
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709.279.1661  
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- 2.4 Principal Contact Person** (for purposes of environmental assessment)
- Mr. Dennis Kelly - Town Manager  
P.O. Box 1118  
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-

### **3.0 THE UNDERTAKING**

#### **3.1 Nature of Undertaking**

The proposed project involves the development of a Marine Industrial Park, consisting of a 20-hectare land parcel with related infrastructure, including access road, water, sewer, and power, all located adjacent to Powers Cove, on the west side of Mortier Bay.

#### **3.2 Purpose/Rationale/Need for the Undertaking**

The purpose of this project is to develop commercial/industrial property with potential future marine access to meet a growing demand in the marine services sector, and to enhance future economic growth within the region.

#### **3.3 Alternatives to The Undertaking**

The alternative to the undertaking would be a do-nothing scenario, in which case the supply and development of adequate infrastructure and subsequent economic growth in the region would be left to other forces. Alternative approaches to carrying out the project were considered in that three potential sites were evaluated for suitability:

- É Site No. 1: Powers Cove
- É Site No. 2: Spanish Room Point
- É Site No. 3: Paddy Head.

Site No. 1, Powers Cove, was chosen as the most desirable location for a variety of reasons, including:

- É access and proximity to required services (water, sewer, power)
  - É availability of land of sufficient size for industrial park
  - É avoidance of areas of potential environmental sensitivity
  - É suitability for potential future marine developments.
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## **4.0 DESCRIPTION OF THE UNDERTAKING**

### **4.1 Geographic Location**

The proposed Marine Industrial Park Development (MIPD) will be located on roughly 20 hectares of undeveloped property situated between McGettigan Boulevard to the northwest and the Waters of Mortier Bay (Powers Cove) to the southeast (co-ordinates 47° 10' 49" North / 55° 08' 30" West), in the Town of Marystown. The development will be accessed from a new road to be constructed from McGettigan Boulevard, just southwest of Powers Pond. Refer to *Figure 1: Site Location*, *Figure 2: Location Plan*, and *Figure 3: Aerial Location Plan*, for details.

### **4.2 Physical Features**

#### **4.2.1 Project Description**

The primary physical features associated with the project will be the paved access road (with power, water and sewer services), a small-scale sewage treatment plant, and commercial lot development.

##### Access Road

Access to the proposed development area will be via a new paved access road, to be constructed from McGettigan Boulevard, just south of Powers Pond. The road will be approximately 1.2 km in length and 7.0 m wide, with a maximum slope of 6%. The access road will be constructed to provincial standards and acceptable for the type of commercial/ industrial traffic that would be anticipated. Some cut and fill using blasted rock may be necessary to achieve the desired slopes. Any backfill requirements (such as engineered granulars) above and beyond this will be obtained from a clean, off-site source. The road right-of-way has already been cleared. A culvert will be required near the end of the road at Powers Cove where there is a small seasonal stream/wet area.

##### Services

Three-phase electrical power will be provided to the development along the new access road right-of-way with a connection to an existing power line at McGettigan Boulevard. The new pole-line will be constructed of approved treated timber poles.

A new 300 mm diameter ductile iron water line will be installed along the access roadway, with a connection to the existing municipal system (also 300 mm diameter ductile iron) at McGettigan Boulevard.

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**FIGURE 1**

**FIGURE 2**



**FIGURE 3**

Sanitary sewer services (approximately four lots) along the first 300 m of the roadway in the industrial park will be connected to the existing Town of Marystown sewer system (via a 200 mm diameter gravity sewer) which discharges into Mortier Bay near the Marystown Shipyard. A 200 mm sanitary sewer will be installed along the rest of the roadway and directed into a Sanitary Sewer Treatment Plant, to be located near the access road terminus at Powers Cove. This plant will be a *Blivet* system with aerobic treatment of wastewater through use of an aerator, which combines active aeration and passive contact treatment, settlement of suspended solids, and sludge storage. Depending on loadings, sludge will be required to be removed on a quarterly basis with disposal at an approved facility. Final effluent discharge, which is expected to meet the Newfoundland Labrador Sewer Control Regulations, will be via an approximately 120 m long outfall into Mortier Bay. The outfall will consist of a 300 mm diameter, High Density Polyethylene (HDPE) pipe floated into place and secured using pre-cast concrete blocks. The STP, which will have a footprint of approximately 25 m<sup>2</sup>, will be located approximately 150 m southwest of the access road terminus.

#### Commercial Lots

Commercial lot development will occur along the length of the access road, with space for approximately 15 one-hectare lots (with some additional space for potential future expansion). This will require the sequential clearing and grubbing of land as each lot is sold and developed.

#### **4.2.2 Existing Biophysical Environment**

The project site is located within the *Maritime Barrens Eco-region*, which encompasses most of the Avalon Peninsula and extends west across much of southern Newfoundland (including much of the Bonavista Peninsula and most of the Burin Peninsula) to the Long Range Mountains. Climate in this region is affected by the Atlantic Ocean which makes it susceptible to long periods of fog. It is characterized by cool summers and short, somewhat moderate, winters. The mean annual temperature is around 5.5° C, with a mean summer temperature of 11.5° C. The mean annual precipitation ranges from 1200 mm to over 1600 mm. Balsam fir is the dominant tree species in this eco-region, though fires have led to replacement of fir by sparse stands of black spruce, balsam fir, tamarack, and shrubs, along with mosses and lichen. *Kalmia* and sphagnum moss grow on blanket and flat bogs.

A Historic Resources Assessment was completed in 2005 for the project site; this assessment did not reveal any significant cultural or historic resources within the area. The elevation of the project site ranges from 58 m above sea level near the west side of the industrial park, to sea level at Powers Cove, with some moderate-to-steep-sloping hillsides towards the east and north. The industrial park area is dominated by a moderate to dense vegetation cover (with the exception of the road right-of-way which is already cleared) consisting primarily

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of balsam fir, with some spruce and juniper. There is a poorly-drained, boggy area located on the south side of the property. The site subsurface would be expected to consist primarily of dense glacial till, with the underlying bedrock composed of sub-aerial alkali basalt flows of the Creston Formation. Several small first-order intermittent streams occur on the eastern side of the property; these converge and flow out near Powers Cove, where they form a small pond (~ 800 m<sup>2</sup> in size) that outlets into Powers Cove. There is a stream located approximately 50 m south of the proposed development which also outlets into Mortier Bay 500 m south of Powers Cove. The area east of the proposed developed is characterized by very deep water and a rocky (locally gravelly) shoreline.

Indigenous terrestrial wildlife for the region typically consist of caribou, moose, lynx, black bear, snow shoe hare, and red fox, though most of these species have not been observed on the project site. Typical bird populations would include crows, gulls, hawks, turrs, eagles, and various songbirds. Marine fauna in the area of the proposed project would be expected to be limited to near-shore fish species such as Cunner (*Tautoglabrus adspersus*), codfish (*Gadus morhua*), Tomcod (*Microgadus tomcod*), sculpin, and sea trout. Species at risk that may occur in the area include the Red Crossbill (*Loxia curvirostra percna*), Monarch Butterfly (*Danaus plexippus*), and Banded Killifish (*Fundulus diaphanus*). Data from the Atlantic Canada Conservation Data Centre (ACCDC) indicate that there were four occurrences of four species of rare plants and two species of rare birds (Caspian Tern and Harlequin Duck) within a 10 km radius surrounding the proposed project site, however, none were found within the boundaries of the proposed project site. It is unlikely that either of these species will be affected by the project as they have not been found at the project site, and the local habitats are not suitable. There are no aquaculture sites or commercial fishing activities within the Mortier Bay area.

### 4.3 Construction

The construction phase of site development will consist of the following main components:

Phase 1:	Access Corridor/Lot Development	Spring	2009
Phase 2:	Sewage Treatment Plant (STP)	Summer/Fall	2009

Access road construction and lot development will take place sequentially, starting with clearing/grubbing, followed by construction of road base and sub-grade, installation of site services, placement of granulars and asphalt base coarse. Merchantable timber removed in the process of access road construction and lot development will be salvaged. Grubbed materials will be properly disposed-of at an approved facility. Initial site construction activities will involve the removal of the vegetative cover (wherever present) from the access road and STP locations only; further vegetation removal will occur only as individual lots

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are sold and developed. Surficial organics and topsoil (where present) will be set aside for re-use on the site, as appropriate. Bog, wetland, and stream areas will be avoided with a 30 m buffer maintained at all times. Construction will utilize industry-standard heavy equipment, including excavators, dozers, and dump trucks. Some areas of the road may require drill/blast methods to achieve the required grades; these materials will then be re-used as required as site fills.

#### **4.3.1 Potential Sources of Pollution During the Construction Phase**

The construction phase of the development will involve:

- É earth-moving activities, including drilling/blasting, site grading
- É placement of concrete and asphalt in upland areas
- É installation of site services including power, water and sewer lines
- É construction of a STP and outfall.

The potential sources of pollution during these activities include site drainage, waste and litter, noise, air emissions, release of petroleum hydrocarbons and other potential contaminants (including suspended solids) into freshwater and marine environments.

#### **4.3.2 Potential Resource Conflict**

##### **4.3.2.1 Impacts to Marine and Freshwater Environments**

###### Concern:

Land based construction has potential to impact the water quality of small local streams (and ultimately the marine environment) due to siltation of water bodies as a result of site run-off, spills/leaks of hydrocarbons and other potential contaminants.

###### Mitigation:

Site run-off water will be contained/directed, as necessary, to vegetated areas which will filter suspended solids. In addition, and where required, silt screens, settling basins, or other measures, will be employed at appropriate locations to prevent siltation of water bodies. A minimum buffer of 30 m will be maintained at all times relative to seasonal streams and wetlands. The sewer outfall (HDPE) will be floated into place and submerged using small pre-engineered weighted concrete blocks (there will be no requirement for placement of wet concrete in the water). The handling of petroleum products on site will comply with the *Storage and Handling of Gasoline and Associated Products Regulations*. No equipment refueling will be permitted within 30 m of any water body or wetland. Sewage will be handled by approved portable facilities during construction. Holding tanks will be pumped on an as-required basis. Domestic waste generated during construction will be collected and disposed of at *Town of Marystown MSWDS*, per the *Waste Material Disposal Act*

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Spill containment equipment will be maintained on site at all times. All equipment will be maintained in good working order.

#### **4.3.2.2 Impacts to the Terrestrial Environment**

##### Concern

The clearing of land for the road and lot development will result in a loss of terrestrial habitat.

##### Mitigation

There are no unique habitats identified in the area of the proposed project and no identifiable species at risk that will be affected by this project. The overall loss of habitat is not expected to have a significant impact on any existing species of plants or animals.

#### **4.3.2.3 Noise and Dust Impacts**

##### Concern

Construction activities associated with the project may generate noise and dust that are aesthetically undesirable or harmful.

##### Mitigation

Equipment on site will have appropriate emission-control equipment. Dust control measures, such as application of water, will be provided on an as-required basis. Noise levels associated with the work are not expected to be significantly greater than the existing condition and will be of a short-term nature. The surrounding area has a relatively low population density with several existing industrial operations in the area. Work schedules will adhere to any existing noise by-laws..

#### **4.3.2.4 Socio-Economic Impacts**

##### Concern

The employment generated during the construction phase of this project has the potential to create problems relative to housing and access to other services.

##### Mitigation

The project is expected to employ less than 50 workers during peak construction period and is not expected to have a significant negative socio-economic impact.

#### **4.3.2.5 Health and Safety**

##### Concern

Construction of a project of this size and scope has inherent risks for the health and safety of workers and the public.

##### Mitigation

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This project will be subject to all applicable Occupational Health and Safety legislation in effect at the time of construction. In addition, through preparation and adherence to a site specific Health and Safety Plan as will be required by the proponent, risks associated with Health and Safety will be kept to a minimum.

#### **4.4 Operation**

The operational stage of the project will overlap, to a certain extent, with the construction phase. The operational phase of the project will commence when the necessary infrastructure is in place to allow for the sale and occupation of the industrial lots by commercial/industrial tenants. At this stage of the project, the site services will be installed and the commercial lots will be occupied. Responsibility for the operation and maintenance of the STP, like the other services, will be the responsibility of the Town of Marystown.

##### **4.4.1 Potential Sources of Pollution During the Operational Phase**

The operational phase of the development will involve:

- É on-going normal commercial/industrial activities associated with an industrial park
- É maintenance of roads, water and sewer services and the STP.

The potential sources of pollution during these activities include noise, air emissions, release of petroleum hydrocarbons and other potential contaminants (including solid waste and effluent from the STP).

##### **4.4.2 Potential Resource Conflicts**

###### **4.4.2.1 Impacts Associated with Leaks/Spills**

Concern:

There is potential for spills/leaks of hydrocarbons and other potential contaminants associated with commercial activities.

Mitigation:

Any leaks or spills will be handled according to existing protocols.

###### **4.4.2.2 STP Effluent**

Concern:

There is potential for degradation of marine water quality associated with sanitary sewer effluent discharge from the STP at Powers Cove.

Mitigation:

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The proposed sewage treatment system, which will be a Blivet Package plant system, will be subject to regulatory approval. These types of systems have been used in the past and associated effluent streams have been shown to meet applicable sewer control regulations. Plant effectiveness will be monitored through a testing and laboratory analysis program.

#### **4.4.2.3 Noise and Aesthetic Impacts**

##### Concern

Operations associated with the project may generate noise and aesthetic issues that are undesirable or harmful.

##### Mitigation

Noise levels associated with site operations are not expected to be significantly greater than the existing conditions for the general area. The surrounding area has a relatively low population density with several existing industrial operations in the area. Work schedules will adhere to any existing noise by-laws. Site zoning will ensure that future residential development is buffered from the area.

#### **4.4.2.4 Socio-Economic Impacts**

##### Concern

The employment and influx of workers/families as a result of this project has the potential to create problems relative to housing and access to other services within the region and municipality.

##### Mitigation

The project is expected to generate considerable employment when developed/operational, however, the pace of development will be gradual and will allow sufficient time for Town to accommodate any associated population growth. The potential negative socio-economic impacts are considered mitigable and the overall impact should be positive.

#### **4.4.2.5 Health and Safety**

##### Concern

Individual operations in the Industrial Park have inherent risks for the health and safety of workers and the public.

##### Mitigation

Individual private business and municipal operations will be subject to all applicable Occupational Health and Safety legislation in effect at that time.

### **4.5 Occupations**

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Site construction and operations for the proposed project will include the following occupations, classified per *National Occupational Classification 2008*:

Construction Phase

- 1 - Engineering Manager (0211)
- 3 - Civil Engineers (2131)
- 2 - Civil Engineering Technologists (2231)
- 2 - Drafting Technologists and Technicians (2253)
- 1 - Land Survey Technologists and Technicians (2254)
- 1 - Construction Inspector (2264)
- 2 - Electrical Power Line and Cable Workers (7244)
- 2 - Telecommunication Line and Cable Workers (7245)
- 2 - Steamfitters, Pipefitters and Sprinkler System Installers (7252)
- 1 - Welders and Related Machine Operators (7264)
- 2 - Carpenters (7271)
- 2 - Concrete Finisher (7282)
- 2 - Heavy Equipment Mechanics (7312)
- 2 - Crane Operators (7371)
- 2 - Drillers and Blasters (7372)
- 2 - Commercial Divers (7382)
- 2 - Truck Drivers (7411)
- 4 - Heavy Equipment Operators (7421)
- 2 - Boat Operators (7436)
- 4 - Construction Trades Helpers and Labourers (7611)

Operations Phase

Employment and occupations created through the Industrial Park Development will be dependent upon the specific businesses that are established, however, the following occupations may be expected associated with maintenance and operation of Town-owned infrastructure.

- 1 - Heavy Equipment Mechanics (7312)
- 2 - Heavy Equipment Operators (7421)
- 1 - Construction Trades Helpers and Labourers (7611).

#### **4.6 Project Related Documents/Bibliography**

Geology of the Marystown (1M/3) and St. Lawrence (1L/14) Map Areas, Newfoundland. 1978. Strong, D.F., O'Brien, S.J., Taylor, S.W., Strong, P.G., and Wilton, D.H.

Eco-regions of Newfoundland; <http://www.heritage.nf.ca/environment/ecoregions>

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Mortier Bay North-Atlantic Marine Service Centre-Industrial Marine Infrastructure Needs Assessment, Prepared for the Town of Marystown, by Newfoundland and Labrador Consulting Engineers Limited. 2004.

February, 2008. Project Description for Marine Industrial Park, prepared by Public Works and Government Services Canada as required for the Canadian Environmental Assessment Act (CEAR Reference Number 08-01-37590).

## **5.0 APPROVAL OF THE UNDERTAKING**

Approvals, permits, and licences that may be required for the undertaking, are as follows:

*Town of Marystown-Development Permit*  
*Newfoundland Labrador Environmental Assessment Regulations*  
*Environmental Protection Act - Assessment Regulations: Permit to proceed*  
*Forestry Act and Regulations, Department of Natural Resources: Commercial Cutting Permit*  
*Department of Transportation and Works-Transportation of Dangerous Goods, Act.*  
*Water Resources Act-Permit to Alter a Water Body (Stream Crossings/Culverts) and Water and Sewer Works Approval*  
*Lease/permit to occupy crown lands*  
*Transport Canada - Navigable Waters Protection Act, Water Lot Lease*  
*Department of Fisheries and Oceans - Permit for Works Affecting Fish Habitat*  
*Canadian Environmental Assessment Act-Screening Report*

## **6.0 SCHEDULE**

Registration Document Submission	June 18, 2008
Government Review and Decision	August 11, 2008
Engineering Design	Fall 2008
Access Road/Service Development/STP	Spring 2009

## **7.0 FUNDING**

Funding for the construction of this project will likely come from several sources such as, (ACOA), Industry Trade and Rural Development (ITRD), Town of Marystown and possibly private industry.

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**8.0 SUBMISSION**



*June 17, 2008*

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*Date*

*Name:*

Mr. Dennis Kelly

*Position:*

Town Manager - Town of Marystown

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NLCEL

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CONSERVATION  
ATTN**

**Environmental Assessment Division**

**June , 2008**

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**ORIGINAL**

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