

**PROJECT REGISTRATION**  
**IN ACCORDANCE WITH THE REQUIREMENTS OF THE**  
**NEWFOUNDLAND AND LABRADOR ENVIRONMENTAL PROTECTION ACT**  
**FOR**  
**FERMEUSE HARBOUR DEVELOPMENT PROJECT**  
**AT**  
**FERMEUSE, NL**

**Submitted to:**  
Environmental Assessment Division  
Department of Environment and Conservation  
P. O. Box 8700  
St. John's, NL A1B 4J6

**Submitted by:**  
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**November 17, 2014**

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## EXECUTIVE SUMMARY

This document provides the Project Registration for the development of an offshore marine base in Fermeuse, NL, submitted to the Provincial Government of Newfoundland and Labrador under the *Newfoundland and Labrador Environmental Protection Act*. The Project will require federal, provincial and municipal approvals and permits for various activities during construction, operation and demobilization.

The Fermeuse supply base represents a significant opportunity for direct and indirect job creation and alternative economic developments at the local and regional level. In effect, development of the supply base in Fermeuse represents a regional economic development strategy designed to generate and drive industry-led or industry-supported innovation based on cooperation between the supply base, industry, the university/colleges, municipalities, and Provincial and Federal Governments.

It is anticipated that the offshore marine base will be a multi-use facility. The completed facility will consist of 12 berths, a semi-submersible rig servicing quay, multiple laydown areas, crane and heavy lift capabilities, and various site buildings (maintenance, administration etc.). The total land area of the completed facility will be approximately 15.3 hectares.

Most of the potential effects on the environment related to construction activities such as increased traffic, noise and dust emissions will be of limited duration. Nonetheless, mitigation measures to avoid or minimize the potential impacts of construction will be carefully defined beforehand and applied whenever required. All of the work performed, along with the materials and methodology, will conform to federal and provincial regulations.

To ensure minimum impacts occur during daily operations of the offshore marine base, the base will operate in compliance with all required regulations and permits and in accordance with the requirements of the building permit.

# **1 NAME OF UNDERTAKING**

The name of the undertaking is the Fermeuse Offshore Marine Base. It is located in the community of Fermeuse approximately 77 kilometres south of St. John's on the Avalon Peninsula.

## **1.1 INTRODUCTION**

This document provides the Environmental Project Registration for the proposed new offshore marine base based on the requirements defined under the Newfoundland and Labrador Environmental Protection Act. The Project Registration is submitted to the Department of Environment and Conservation in order to initiate the provincial environmental assessment process. The proposed offshore marine base location is in Fermeuse Harbour, located in the Town of Fermeuse, NL.

This Project is subject to provincial environmental assessment (EA) processes and must satisfy all conditions. The provincial process requires a 45 day review period, including time for public review and comment.

Fermeuse Enterprises Limited (FEL) recognizes that, in addition to the EA approvals, the Project must obtain all of the required environmental approvals, licences and permits through the federal and provincial permitting processes. A list of relevant legislation and associated permits is contained in Appendix A.

Environmental protection, application of high standards for health and safety, and application of best practises are paramount to the successful development of this project. Mitigation measures to minimize any adverse impacts of the project on the environment and communities, while maximizing local benefits, have been and will be continued to be FEL's Policy for this project throughout all stages of the development.

## 2      **PROPONENT**

Name of Corporate Body:

Fermeuse Enterprises Limited (FEL)

Address:

Fermeuse Enterprises Limited  
General Delivery  
Fermeuse, NL  
Canada A0A 2G0

President:

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Principal Contact Persons for purposes of environmental assessment:

<b>Proponent Contact</b>	Mr. Mike Rose 74 O'Leary Avenue St. John's, NL A1B 2C7 Phone: (709) 765 - 1000
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FEL and its main shareholder - Harbour Grace Shrimp Co Ltd. – view the opportunity to develop Fermeuse Harbour (at Lumley Cove and Lawe's Point) as an effective method of long-term reinvestment in rural Newfoundland and Labrador. Since the 1970s, the Harbour Grace Shrimp Co Ltd. has been a pioneer in the development of the Northern Shrimp fishery supporting sustainable communities in rural Newfoundland and Labrador.

### **3 THE UNDERTAKING**

#### **3.1 NATURE OF THE UNDERTAKING**

##### **3.1.1 Overview**

Fermeuse Enterprises Limited (FEL) proposes to construct and operate an offshore marine base to service the offshore oil and gas industry in Newfoundland and Labrador out of Fermeuse Harbour.

To function as a successful offshore marine base a location must possess a number of characteristics, including:

- Safe harbour in all weather conditions,
- Sufficient deep water and berthing space
- Sufficient lay down areas
- Sufficient upland development area for offshore support services buildings
- Adequate infrastructure to efficiently handle offshore supply vessels
- Strategic location to access offshore oil fields off the coast of Newfoundland Labrador.
- Fermeuse Harbour possesses all of these important characteristics.

##### **3.1.2 Authorizations Required**

The Project will require federal, provincial and municipal approvals and permits for various activities during construction, operation and demobilization. Anticipated approvals required are listed in Appendix A.

Approval and permitting requirements under provincial legislation and regulation will govern much of the physical activity at the site, from the environmental assessment process to activities such as site clearing, site excavations and fill, road construction,

wharf construction, etc., through operations and decommissioning. Government requirements and policy also affect socio-economic aspects of the offshore marine base construction and operation, such as occupational health and safety, training, and employment programs. The Project will meet requirements of town by-laws.

### **3.1.3 Public Consultations**

Over the last two years it has been well known in the Fermeuse area that FEL has been considering the option of proceeding with a supply base development. In that regard there have been many informal and formal meetings over the last number of years.

The first publicly advertised meeting took place at the Community Hall in Fermeuse on Wednesday, November 5, 2014. The meeting, which had been advertised in advance on the Town's Facebook page, was well attended with 35-40 people in attendance. The majority of attendees were Town of Fermeuse residents. There were a small number of attendees from neighbouring communities and individuals who own land in Fermeuse but live elsewhere.

FEL's project manager, Mr. Mike Rose, provided a Power Point presentation which outlined the specifics of the proposed development. The overview indicated that while the entire proposed footprint would be registered for environmental assessment, the project would likely proceed in smaller blocks as market demand grows. This was an open format meeting and it concluded with a question/answer session. Among the questions raised at the meeting, for example, was the degree to which there would be noise as a result of this project. Mr. Rose acknowledged that the construction phase would inevitably generate a fair degree of noise which is common for a construction project of this type. It is felt some of that noise would be unavoidable, but that measures would be implemented to control and limit noise during construction. The majority of the noise will be associated with pile driving during wharf construction activities and will be limited to normal working hours. Mr. Rose indicated that other opportunities to mitigate against noise such as berms and buffers were being considered during the operational phase. There were also concerns raised regarding additional highway traffic that might result if this project



were to locate in Fermeuse; it was generally agreed this is an economic growth issue that may have to be tackled in partnership with Governments. Finally, there were questions about how the project proponents would engage with and / or address concerns of local residents whose properties may be within or near the proposed project footprint. Mr. Rose indicated that the proponents are eager to ensure that fair market evaluations and purchase offers are made to anyone that may be within the proposed project footprint, and that the proponent is very interested in working with everyone affected to ensure maximum consideration, fair treatment, and cooperation.

Even though this was the only public meeting, it is important to note that FEL has been in close contact concerning this proposal with the Town Council of Fermeuse, and other key organizations, for more than two years.

Over the last two years FEL has worked as closely as possible to present the social and economic benefits to the Town Council of Fermeuse, the Fermeuse-Port Kirwan Harbour Authority (representing fishery interests), and interested local residents.

Formal presentations and meetings have occurred with these groups on a regular basis since October 2012. FEL has heard and understands the Town's responsibility to plan effectively for the future. FEL will continue to work with and support the Town of Fermeuse, and all surrounding communities that will realize social and economic benefits and a growing municipal tax base as a result of our project. FEL also appreciates and understands the continuing importance of Fermeuse/Port Kirwan harbour as a fishing industry port. Fermeuse Harbour continues as a home base for many independent fishermen. Therefore, a priority objective of this project is to create a mixed-use industrial port serving the interests of the fishing industry, communities, local businesses, and new marine industry investors.

#### **3.1.3.1 Government Agencies**

In particular, FEL has discussed this project and its implications with senior officials within the Small Craft Harbours division of Fisheries and Oceans Canada, Newfoundland and Labrador Region. These meeting were required because the

footprint of the proposed project includes a water lot property owned by Small Craft Harbours. As a result of those meetings, the Small Craft Harbours division has expressed its willingness to examine ways it can meet the demands of the proposed project while, at the same time, ensuring that the Fermeuse-Port Kirwan Harbour Authority and the fishers they serve will not suffer loss of suitable wharf space within the harbour.

During the preparation of this environmental assessment report, FEL also met with senior staff in the following key Government departments to discuss the scope and nature of the project:

- Environmental Assessment Division Department of Environment & Conservation, Government of Newfoundland and Labrador
- Pollution Prevention Division, Department of Environment & Conservation, Government of Newfoundland and Labrador
- Fisheries Protection Program (Marine and Coastal Development), Fisheries and Oceans Canada, Newfoundland and Labrador Region, Government of Canada.

### **3.2 RATIONALE FOR THE UNDERTAKING**

Long valued by the fishing industry for its natural “safe haven” characteristics, the size and scale of Fermeuse Harbour make it an ideal port to expand into alternate industrial uses while, at the same time, protecting and advancing the commercial interests of all current users.

The Fermeuse supply base represents a significant opportunity for direct and indirect job creation and alternative economic developments at the local and regional level. In effect, development of the supply base in Fermeuse represents a regional economic development strategy designed to generate and drive industry-led or industry-supported innovation based on cooperation between the supply base, industry, the university/colleges, municipalities, and Provincial and Federal Governments.

Prior to the 1992 ground fish moratorium, Fermeuse/Port Kirwan harbour was a fishing industry commercial hub. Since that time there has been limited and declining shore-based fishing activity. Given its natural attributes for shelter and availability for fishing industry services, however, Fermeuse Harbour continues as a home base for independent fishermen. While very positive, these remaining industrial activities provide a limited and declining municipal tax base. The Towns and region have suffered dramatic losses of employment and population base. This proposal supports existing industrial activity, especially fishing, and will attract new industry as a means to grow the available tax base through which improved municipal and harbour services can be maintained and improved.

Since first oil production from Hibernia in 1997, the Newfoundland and Labrador’s oil and gas industry has progressed steadily. Production comes from the prolific Jeanne d’Arc Basin and includes the Hibernia, Terra Nova, White Rose, and Hebron discoveries and their various subsea tie-backs. Statoil’s announcement of three significant discoveries in the Flemish Pass Basin in 2013, will likely initiate additional rapid expansion of the industry.

In addition to the Jeanne d'Arc and Flemish Pass Basins, there are more than 20 other unexplored and prospective offshore basins. Furthermore, the island of Newfoundland is targeted as a natural centre for industry expansion into the Arctic, e.g., off Greenland. All of these facts support the requirement for a new, modern offshore supply base.

Many global service providers are now focusing their attention on this geographical area. Increasing exploration and production investments expected between 2014 and 2020 from Statoil, Exxon, Husky, Suncor, BP and Shell. These companies and well-known global suppliers already established in the Province have indicated they will be expanding their subsea servicing activities in the region. They also indicate that there are infrastructure limitations which must be overcome for greater efficiencies; for example, cost effective sub-sea operations demand large spaces and heavy lifting capacity near a waterfront.

## 4 DESCRIPTION OF THE UNDERTAKING

Sections 4.1-4.5 provide an overview of site selection; the biophysical and socio-economic environment; the construction, operation and decommissioning phases of the project; and information on the workforce.

### 4.1 PROJECT SITE INFORMATION

#### 4.1.1 Overview

Fermeuse is located on the eastern portion of the Avalon Peninsula approximately 77 kilometers south of St. John's via paved two-lane highway. It has historically served as a summer fishing station and today the fishery is still the main economic contributor of the town.

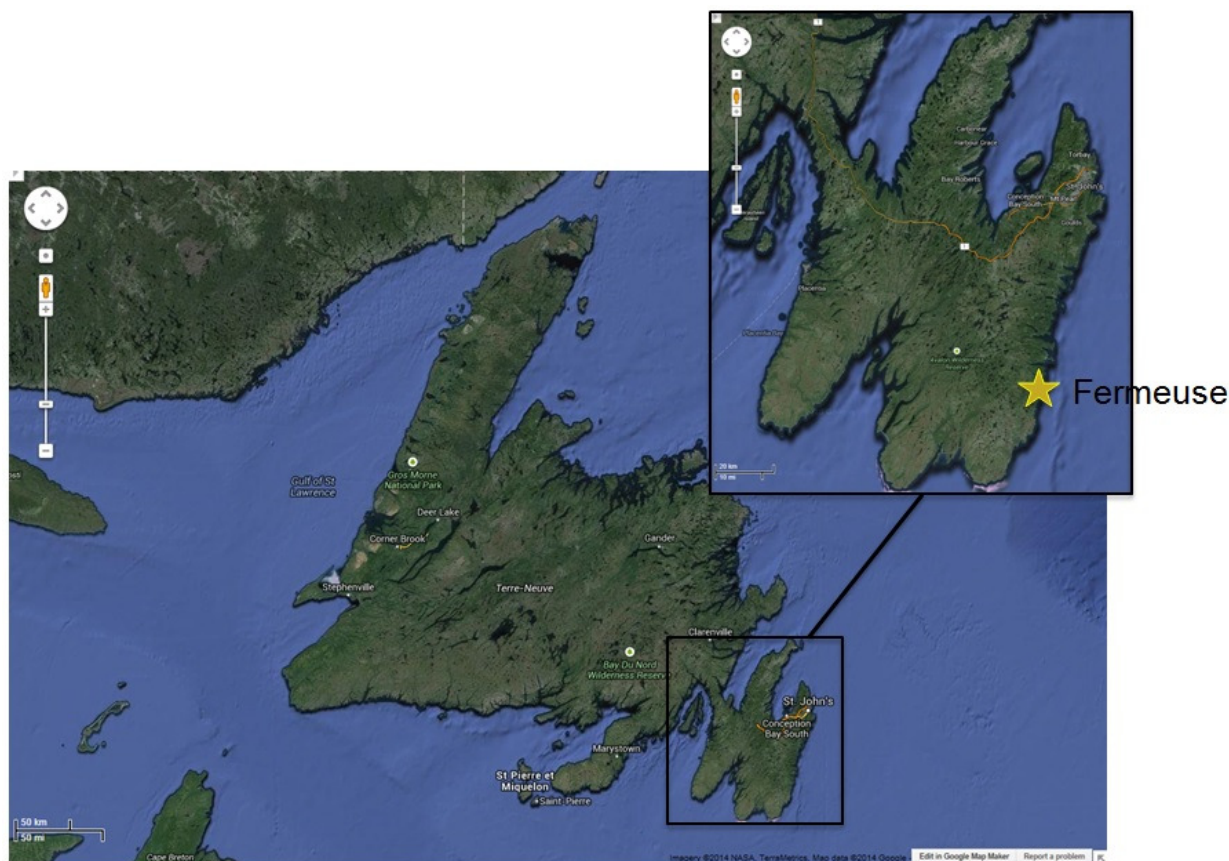


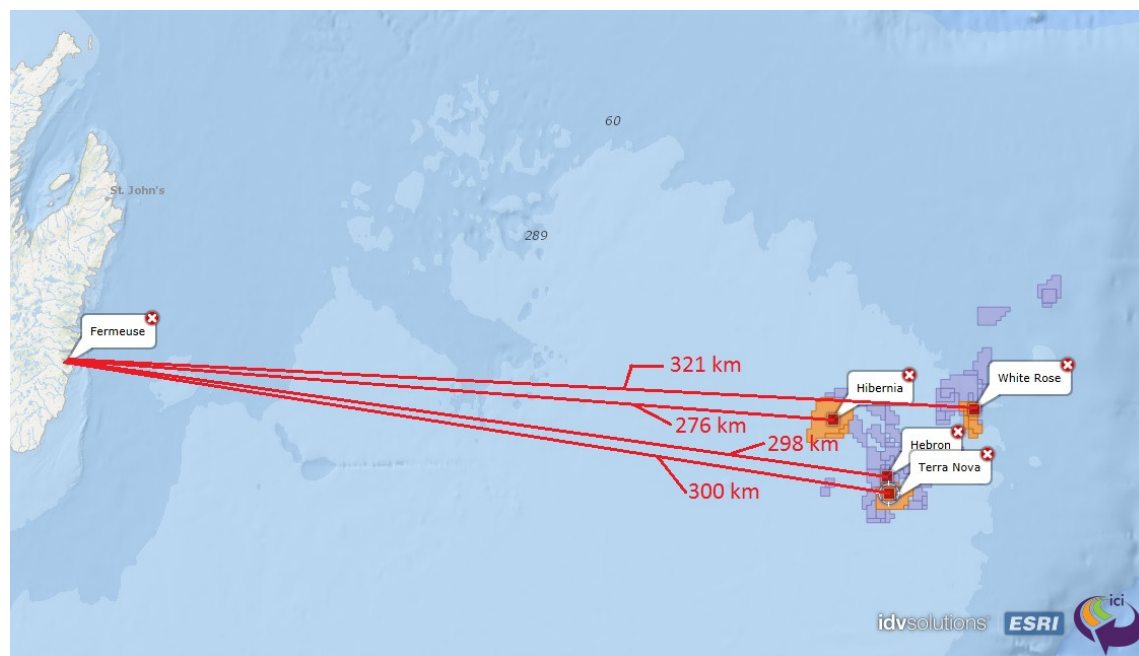
Figure 4.1.1 – Fermeuse Location Map (<http://www.google.ca>)

The harbour has good proximity to the offshore oil and gas operations off the coast of Newfoundland. The Hibernia platform is approximately 298 kilometres from Fermeuse Harbour.

Fermeuse Harbour is relatively long and narrow (approximately 5 kilometers). It provides a naturally sheltered port with hilly terrain to the north and south.

#### 4.1.2 Geographical Location

Strategically located on the East coast of Newfoundland, Fermeuse is an ideal location to construct an offshore marine base to service the oil and gas industry off the coast of Newfoundland. Fermeuse is situated on the southeast shore of Newfoundland's Avalon Peninsula. The site will be situated along the Fermeuse Harbour, a deep fiord-like inlet. The harbour has good proximity to the offshore oil and gas operations off the coast of Newfoundland (see Figure 4.2). The Hibernia platform is approximately 298 kilometres from Fermeuse Harbour.



**Figure 4.1.2 – Relative Location to Offshore Oil Fields. (Base Map from NIOA Website: <http://maps.noiamap.ca/noiamap/>)**

### **4.1.3 Physical Environment**

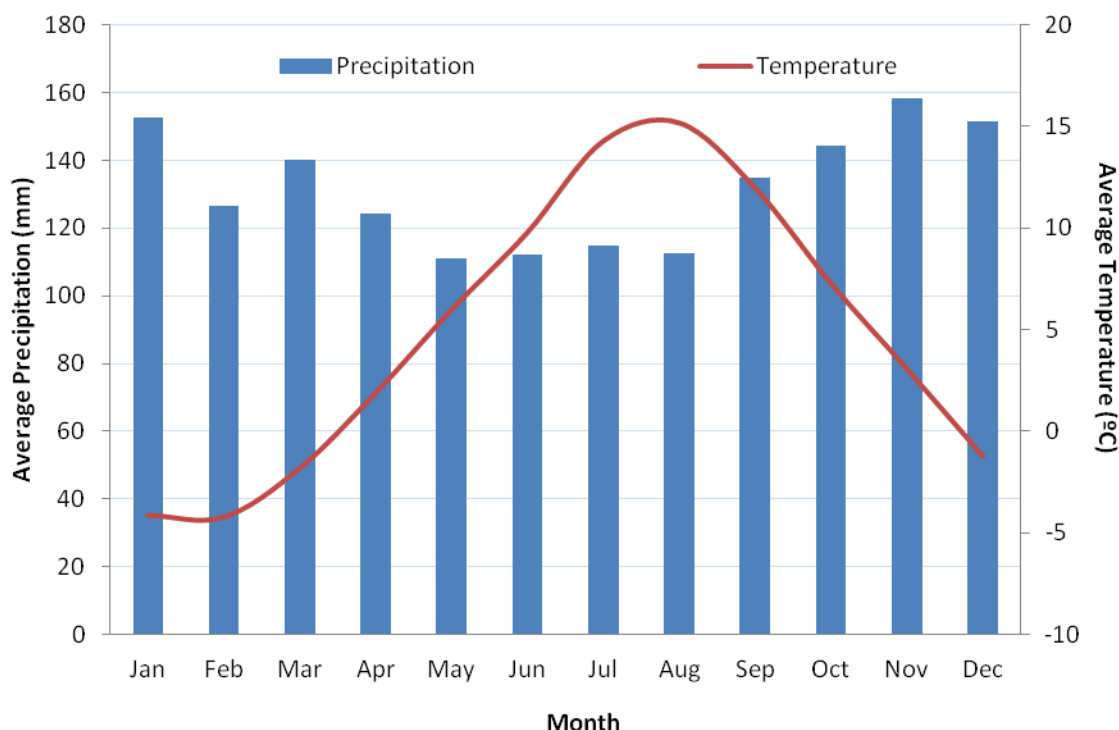
#### **4.1.3.1 Geology**

The harbour in Fermeuse is surrounded by hills. It is expected these hills will contain bedrock with little overburden. In the next phase of the project, a geotechnical program will be carried out to determine the subsurface conditions. Rock found in the hilly terrain on the project site will be utilized during construction and used as rock fill. Any other suitable material that is excavated during construction will be stock piled and used during construction.

#### **4.1.3.2 Climate and Meteorology**

The climate in the Maritime Barrens ecoregion is influenced by the Atlantic Ocean, which causes long periods of fog. The east coast of the Avalon Peninsula experiences relatively mild winters with varying snow cover. The summers are cool with low clouds and fog. Figure 4.1.3 shows climate data obtained by Environment Canada from the Cappahayden climatological station, located near Fermeuse. The average annual precipitation between 1981 and 2010 was 1583.4mm, with an average monthly temperature of 4.9°C.

Winter temperatures in Newfoundland are characteristic of a stormy maritime climate due to its day-to-day variability. Incursions of moist, mid-Atlantic air are frequent. On the southeast coast, where the moderating influence of the ocean is greatest, the winter average is between -2°C and -4°C (Environment Canada, 2014).



**Figure 4.1.3 - Average Monthly Precipitation and Temperature near Project region.**

The mean annual rainfall is approximately 1411.4 mm, with the months of September, October, and November experiencing the highest amount. The mean annual snowfall amount is 171.8 cm. Snow typically begins in November and ends in May, with the maximum mean snowfall of 51.3 cm occurring in January. The average date of the last spring frost is June 5th, with the average date of the first fall frost being October 8th. The average length of time per year experiencing frost-free conditions is 124 days (Environment Canada, 2014).

Newfoundland has the strongest winds of any province in Canada, with most stations recording average annual wind speeds greater than 20 km/h. Generally, coastal areas tend to have stronger winds than inland stations. Winds are predominately from the west year-round, however, variations are common both from month to month and location to location (Environment Canada, 2004 website). The wind rose for the Fermeuse area is shown in Figure 4.1.4.



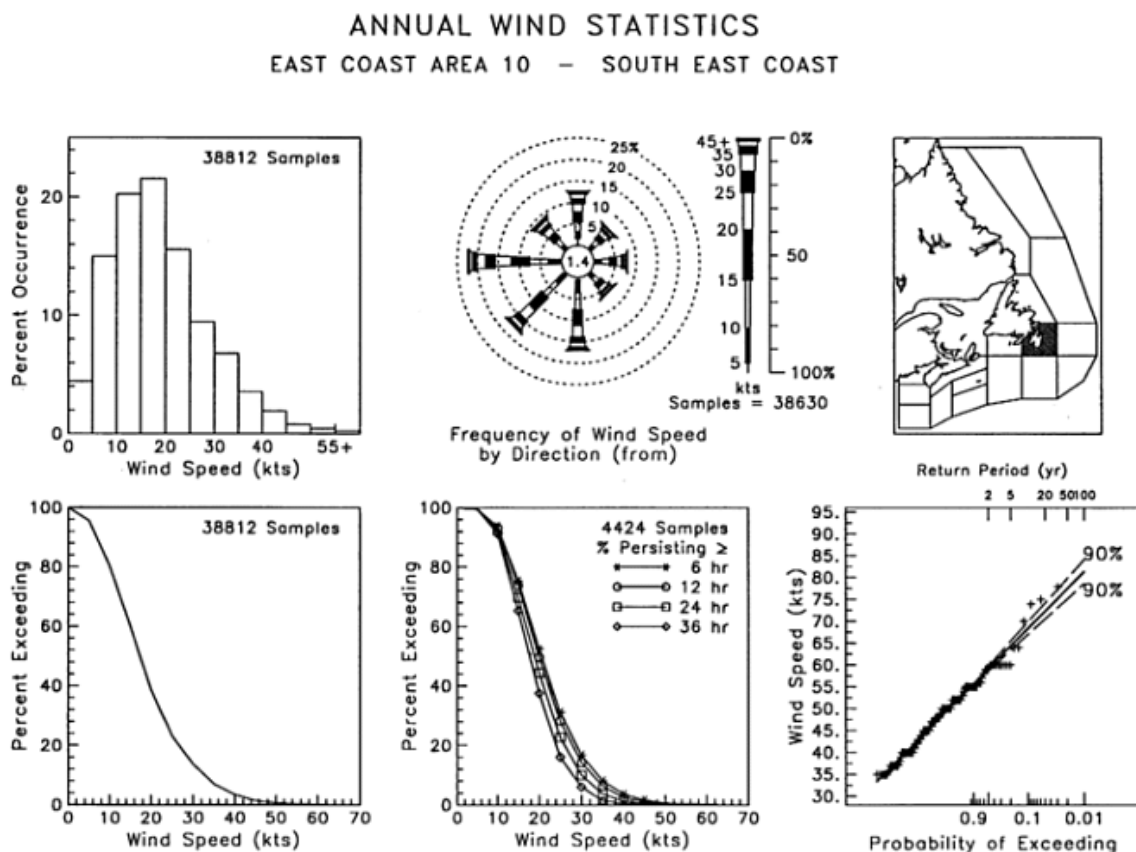


Figure 4.1.4 - Annual Wind Statistics (Wind and Wave Climate Atlas, <http://www.meds-sdmm.dfo-mpo.gc.ca/isdm-gdsi/waves-vagues/atlas-eng.htm>)

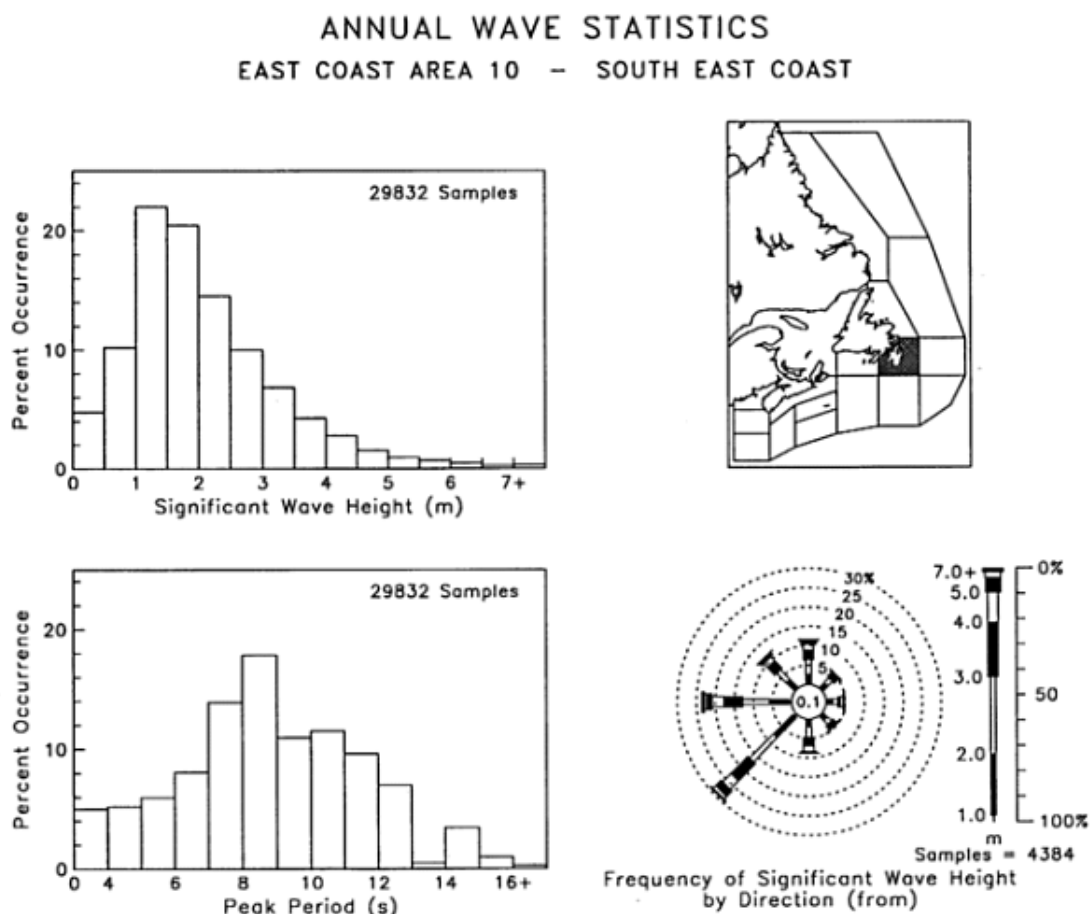
#### 4.1.3.3 Bathymetry

Fermeuse Harbour is situated in a southeast direction and is approximately 5 km long with an average width of 800 meters. It is very well sheltered with depths of 10 to 22 fathoms, making it one of the deepest Harbours in Newfoundland (Irish Loop Development Board, 2009).

#### 4.1.3.4 Waves

The narrow harbour bounded by hills offers some protection from most winds except those in the east and southeast quadrants. This in turn reduces the amount of wave activity in the harbour. As can be seen from the wind rose presented in Figure 4.1.4, the lowest probably of wind is from the east and southeast directions.

Figure 4.1.5 shows the annual wave statistics for the south east coast of Newfoundland. The largest significant waves come from the southwest and west directions. Since the marine base is to be located on the south side of the harbour, waves from the southwest and west will not affect vessel berthing and mooring.



**Figure 4.1.5 - Annual Wave Statistics (Wind and Wave Climate Atlas, <http://www.meds-sdmm.dfo-mpo.gc.ca/isdm-gdsi/waves-vagues/atlas-eng.htm>)**

#### **4.1.3.5 Tides**

The tidal regime at the study site is semi-diurnal (two high water and two low water tides each lunar day).

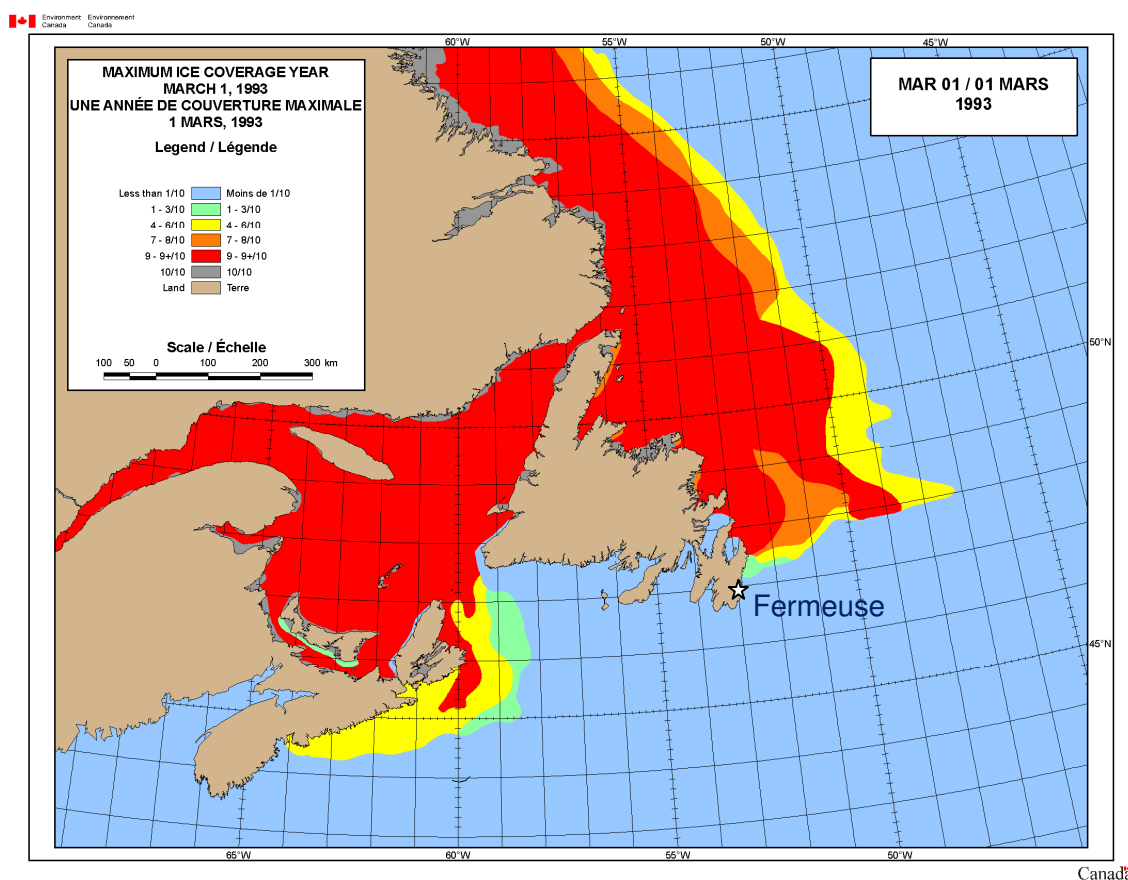
**Table 1: Site Tidal Information**

Location	Height Above Chart Datum (m)				
	Large Tide		Mean Tide		Mean Water Level
	H.H.W	L.L.W	H.H.W	L.L.W	(MWL)
Fermeuse	1.5	0.1	1.3	0.2	0.7

HHW – Higher High Water  
LLW – Lower Low Water

#### **4.1.3.6 Sea Ice and Icebergs**

Fermeuse offers a virtually ice-free harbour with navigation occasionally hampered by southerly flow of icebergs and pack ice off the entrance of the harbour in the spring of the year. It is possible for a thin layer of ice to form in the harbour during extreme temperatures in winter months, but that is a rare occurrence. This type of ice will not pose a risk to navigation for the size of vessels expected to use the facility.



**Figure 4.1.6 - Maximum Ice Coverage Year, 1993 (Environment Canada)**

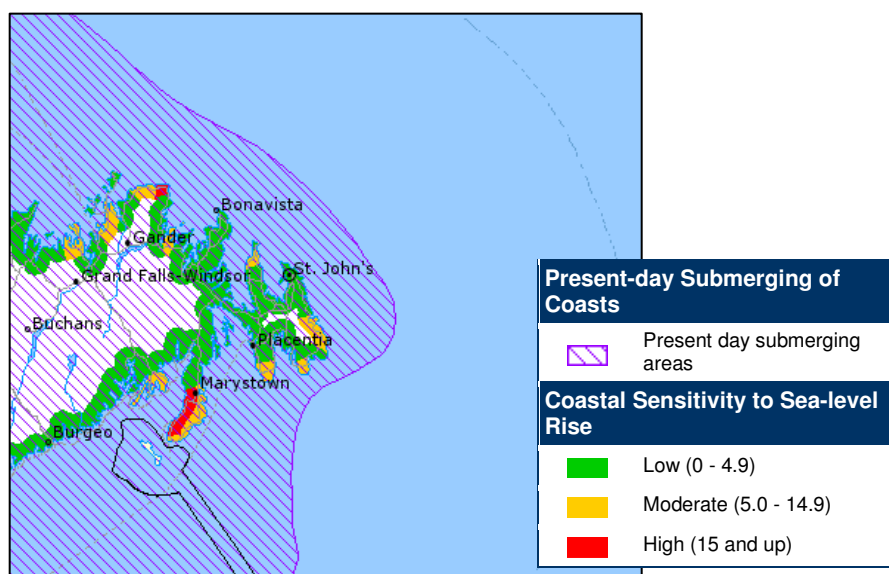
#### **4.1.3.7 Climate Change**

Climate warming is expected to cause warming of the oceans and the partial melting of glaciers and ice-caps, resulting in global rise in sea level. By the end of this century, the global mean sea-level rise could amount to 0.09 to 0.88 meters (Intergovernmental Panel on Climate Change 2001 Natural Resources Canada Website). Sea level rise in Canada is a significant issue because the coastline exceeds 203,000 km.

See Figure 5 for a map showing the sensitivity of the coastlines of the south east coast of Newfoundland and Labrador to sea level, due to climate warming. Sensitivity here indicates the degree to which a coastline may experience physical changes such as flooding, erosion, beach migration, and coastal dune

destabilization. It is measured by a sensitivity index, which is obtained by manipulating scores of 1 to 5 attributed to each of the seven values: relief, geology, coastal landform, sea-level tendency, shoreline displacement, tidal range, and wave height. This index is a modified version of the coastal vulnerability index of Gornitz (1990).

The blue-shaded area on the map shows the expansions of the submerging areas in Canada's coasts due to climate warming.



**Figure 4.1.7 - Coastal Sensitivity to Seal Level for South East Coast of Newfoundland and Labrador**

Storm surges will cause more damage to the communities located close to the level of the ocean as sea level rises. Fermeuse is one of the communities that will be affected by this.

The Newfoundland Labrador Department of Environment and Conservation indicates that seawater rise due to climate change is between 3-5 millimeters per year on the Avalon Peninsula. Over the next 50 years, it is expected that the sea level will rise at least 250 millimeters. Sea level rise has been taken into account in the preliminary design of marine structures.

#### **4.1.3.8 *Effect of Physical Environment on the Undertaking***

The physical environment will provide the dominant set of design criteria for the project and will govern the design of many aspects of the proposed facility. The area is subject to high winds, large amounts of precipitation both in the form of rain and snow, fog seasonally and cold temperatures seasonally. All structures either located on land or in the marine environment will be designed to withstand the maximum expected environmental loads with the appropriate safety factors to provide a robust design. Measures will be taken to minimize the effect of the environment during the construction and operation stages of the project. The physical design of temporary structures for the aid of construction, will take into account winter conditions, maximum wind and wave action and extreme sea state. Construction activities will be scheduled to avoid environmental impacts if there is a safety concern.

#### **4.1.4 *Biological Environment***

This section provides an overview of the Fermeuse biological setting including those species considered at risk by the Species at Risk Act (SARA) and the Provincial Endangered Species Act.

##### **4.1.4.1 *Terrestrial Mammals and Furbearers***

Fermeuse is located near the Avalon Wilderness Reserve. The following animals are common or abundant in the Avalon Peninsula, according to the Newfoundland Department of Environment and Conservation:

Woodland caribou	Moose	Mink
Snowshoe hare	Red fox	Red squirrel
Little brown bat	Meadow vole	Masked shrew
Eastern chipmunk		

None of the above species are considered at risk. The woodland caribou is considered a threatened species in some areas of Newfoundland and Labrador, but is not considered at risk in the study area. (Newfoundland Department of Environment and Conservation). It would be a very rare occurrence for any of the terrestrial animals found at the reserve to be found at or around the Project site.

#### **4.1.4.2 Marine Mammals**

Harbour and Harp Seals; dolphins and porpoises; Humpback, Fin, Pothead and Minke Whales are all present in the waters off the Eastern Avalon. Occasionally, some of these species may enter Fermeuse Harbour. These incidences are rare and there are no noted breeding areas of these species in Fermeuse Harbour. Seals would occasionally be present in Winter while dolphins and whales would occasionally be seen during capelin season.

#### **4.1.4.3 Birds**

Bird species common to the Maritime Barrens ecoregion (southeastern subregion), according to the Newfoundland Department of Environment and Conservation and Canadian Parks and Wilderness Society (CPAWS) are:

##### Woodland Birds:

Ruby-Crowned Kinglet	Northern Waterthrush	White-Throated Sparrow
Hermit Thrush	Fox Sparrow	Yellow-Rumped Warbler
Dark-Eyed Junco	Pine Grosbeak	Willow Ptarmigan
Savannah Sparrow	American Pipit	Horned Lark
Swamp Sparrow	Red Crossbill	

##### Shorebirds:

Wilson's Snipe	Common Snipe	Greater Yellowlegs
Least Sandpiper		

##### Seabirds:

Razorbill	Thick-billed Murre	Black Guillemot
Herring Gull	Great Black-backed Gull	Ring-billed Gull
Northern Fulmar	Manx Shearwater	Common Tern
Arctic Tern	Caspian Tern	Common Eider
Surf Scoter	White-winged Scoter	Harlequin Duck
Common Goldeneye	Scaup	Black Duck
Green-winged Teal	Bufflehead	

There are no known breeding areas for any of the birds noted above within the proposed project boundaries.

#### **4.1.4.4 *Marine Finfish, Shellfish and Turtles***

Fish in the vicinity of Fermeuse Harbour include flounder, plaice, cod, lumpfish, capelin, haddock, skate, herring, mackerel, salmon and American Eel. Marine invertebrates include Snow, Toad and Rock Crabs, shrimp, mussels, lobster, scallop, squid, periwinkle, sea urchin, corals and jellyfish. Leatherback turtles are present in the Eastern Avalon area. There have been no noted sightings in Fermeuse Harbour. A habitat survey is currently being completed to determine what marine species may be present in the project site area; the results of that study will be provided as soon as they become available.

#### **4.1.4.5 *Commercial Fisheries***

Fishing is the main economic contributor of the town of Fermeuse. There is currently one major species landed in Fermeuse, namely snow crab. In this respect, Fermeuse is an offloading/shipping centre only. Once the crab is offloaded, it is shipped via trucks to distant processing facilities. Ice making facilities are also available in the port to service the boats operating out of Fermeuse.

Aside from small scale fisheries related to recreational cod, as well as limited lobster fishing involving mainly local sales, there are few if any other fishing activities that take place in Fermeuse Harbour. FEL very strongly supports and encourages growth and continuing diversification of the fishing industry in Fermeuse and beyond.

#### **4.1.4.6 *Species at Risk***

The only at risk species of woodland bird that may potentially be found at the project site is the Red Crossbill. This species of bird is considered endangered and is protected under the Species at Risk Act (SARA). However, this species is not common in the eastern areas of Newfoundland and the last recorded nest sightings occurred in 1977 (Newfoundland Department of Environment and Conservation)



Seabird species at risk that may be found at the site is the Harlequin Duck. The eastern Harlequin Duck is currently listed as a species of special concern on Schedule 1 of SARA and vulnerable under the Newfoundland and Labrador Endangered Species Act. The population of Harlequin Ducks wintering along the eastern seaboard is likely distinct from that wintering in Greenland. The eastern seaboard population is probably in the range of 2,000 to 3,000 individuals, and is concentrated at a small number of traditional wintering sites. Some of these locations, such as Cape St. Mary's, are subjected to chronic oil pollution related to marine vessels transiting the area. No reports were found identifying Fermeuse Harbour as a wintering site for the Harlequin Duck.

American Eels have been reported throughout Newfoundland and the south-eastern coast of Labrador as far north as Hamilton Inlet. The American eel spends most of its life in freshwater and estuaries but migrating to sea to spawn. Eels typically begin their spawning migration in late summer and fall throughout much of eastern Canada, although migration from lakes that are far inland may begin earlier. In Newfoundland, eels migrate to sea after spending twelve to thirteen years in freshwater. Adult eels presumably die after spawning. Recent concern regarding population decreases in the Great Lakes has prompted COSEWIC to list the American eel as a Species of Concern in 2006 (COSEWIC 2006). This designation is defined as a wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.

The leatherback sea turtle is designated as endangered on Schedule 1 of SARA. For North Atlantic leatherback turtles, nesting occurs from March–July on sandy beaches of the Caribbean and Central and South America. It is thought that leatherbacks follow the Gulf Stream in the Northwest Atlantic because their primary prey, jellyfish, are concentrated where the Gulf Stream meets the colder waters of the Labrador Current. Adult leatherbacks are often sighted in the waters off Nova Scotia and Newfoundland from June to October, with peak abundance in August and September. To date there has been no reported occurrence of leatherback turtles entering Fermeuse Harbour.

#### **4.1.5 Existing Socio-Economic Environment**

##### **4.1.5.1 *Demography***

According to the 2011 Census of Canada, the population of Fermeuse was 323, with half being male and half being female. Approximately 23.2% of the population is under the age of 20 years, and about 21.7% are above the age of 65 years. The median age of the living in Fermeuse is 49.7 years. The population is overall increasing, and the population increased 13.7% between the years 2006 and 2011.

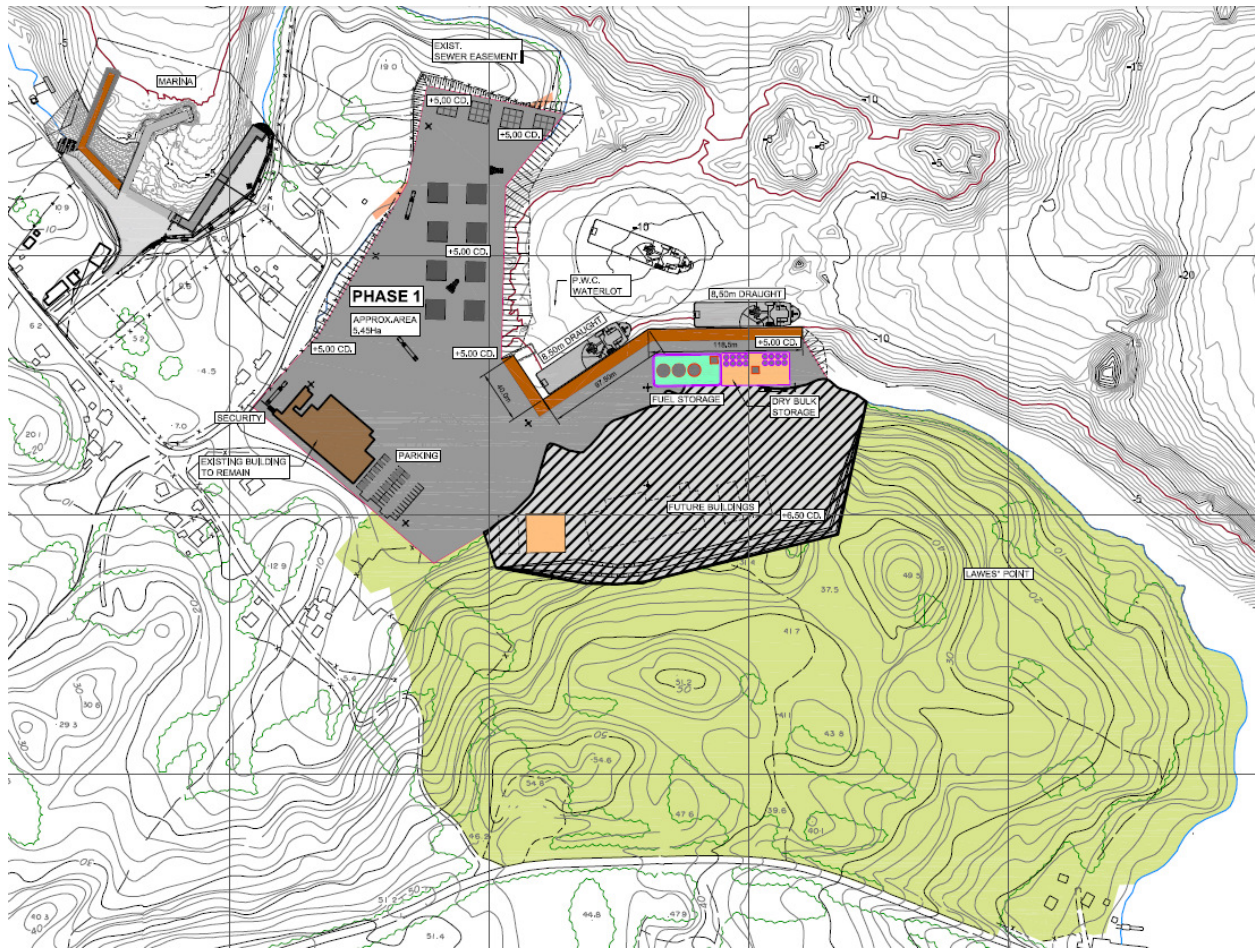
## **4.2 PHYSICAL FEATURES OF UNDERTAKING**

It is anticipated that the offshore marine base will be a multi-use facility. The completed facility will consist of 12 berths, a semi-submersible rig servicing quay, multiple laydown areas, crane and heavy lift capabilities, and various site buildings (maintenance, administration etc.). The total land area of the completed facility will be approximately 15.3 hectares.

### **4.2.1 Phase 1**

The first phase of development may include (see discussion – Section 4.3.1):

- Demolition and backfill of existing Small Craft Harbours site between Sheep's Head and Lawe's Point, subject to required agreements with the Harbour Authority, DFO and the Province (under discussion);
- Construction of two (2) berths with 8.5 metre draught. One berth to include RORO capabilities;
- 5.45 hectares of land for multipurpose use such as laydown areas, pipe fabrication, bulk storage, and general fabrication areas;
- Constructions of fabrication and administration building(s);
- Construction of fuel storage tanks;
- Installation of water and sewer lines.



**Figure 4.2.1 – Phase 1**



## 4.2.2 Phase 2

The second phase of development may include (see discussion – Section 4.3.1):

- Construction of two (2) berths with 10 metre draught. One berth to include RORO capabilities;
- 4.03 hectares of land for multipurpose use such as laydown areas, pipe fabrication, bulk storage, and general fabrication areas.

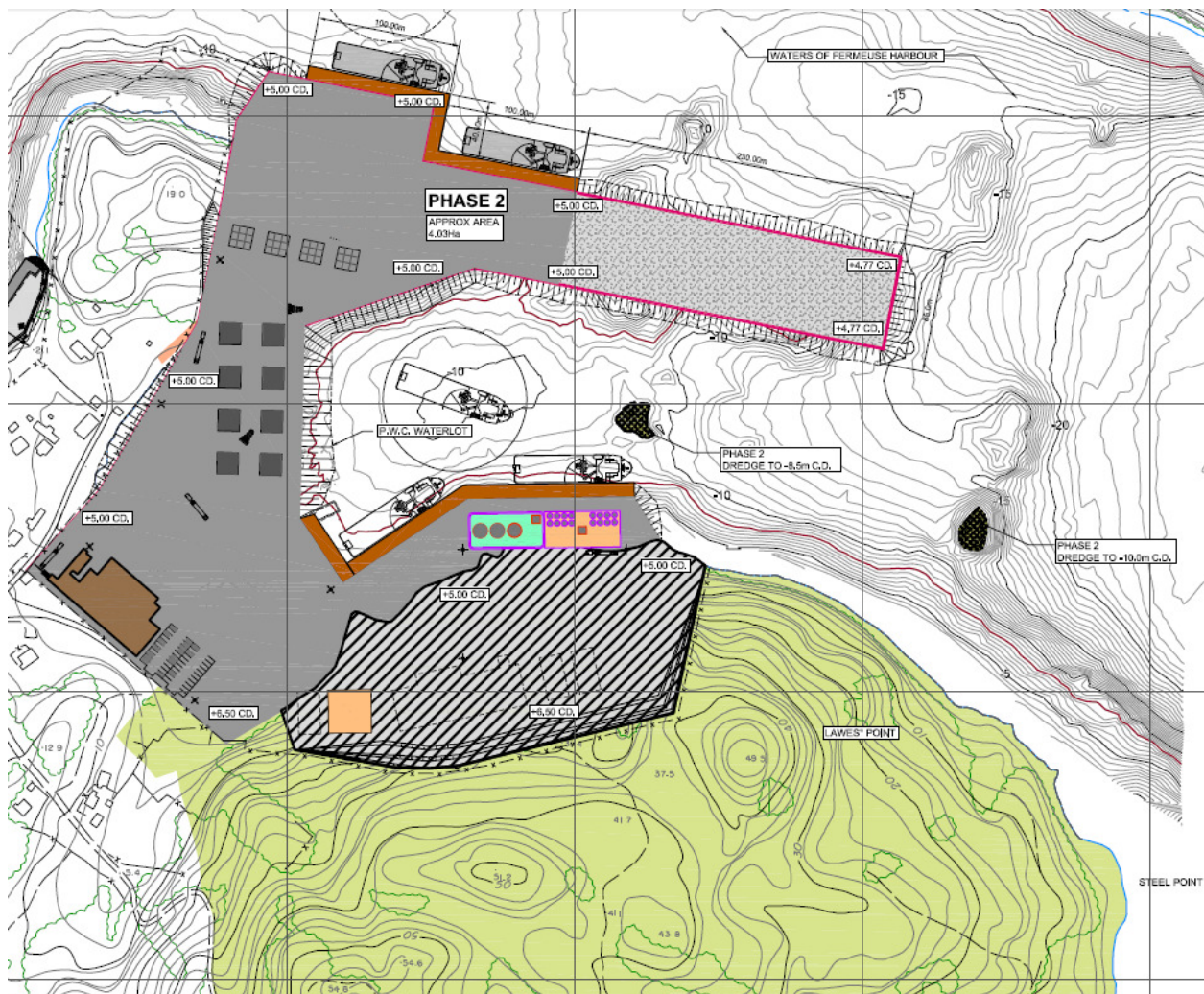


Figure 4.2.2 – Phase 2

### 4.2.3 Phase 3

The third phase of site development may include (see discussion – Section 4.3.1):

- Construction of two (2) berths with 10 metre draught;
- Construction of a rig servicing quay with 15 metre draught;
- 1.49 hectares of land for multipurpose use such as laydown areas, pipe fabrication, bulk storage, and general fabrication areas.

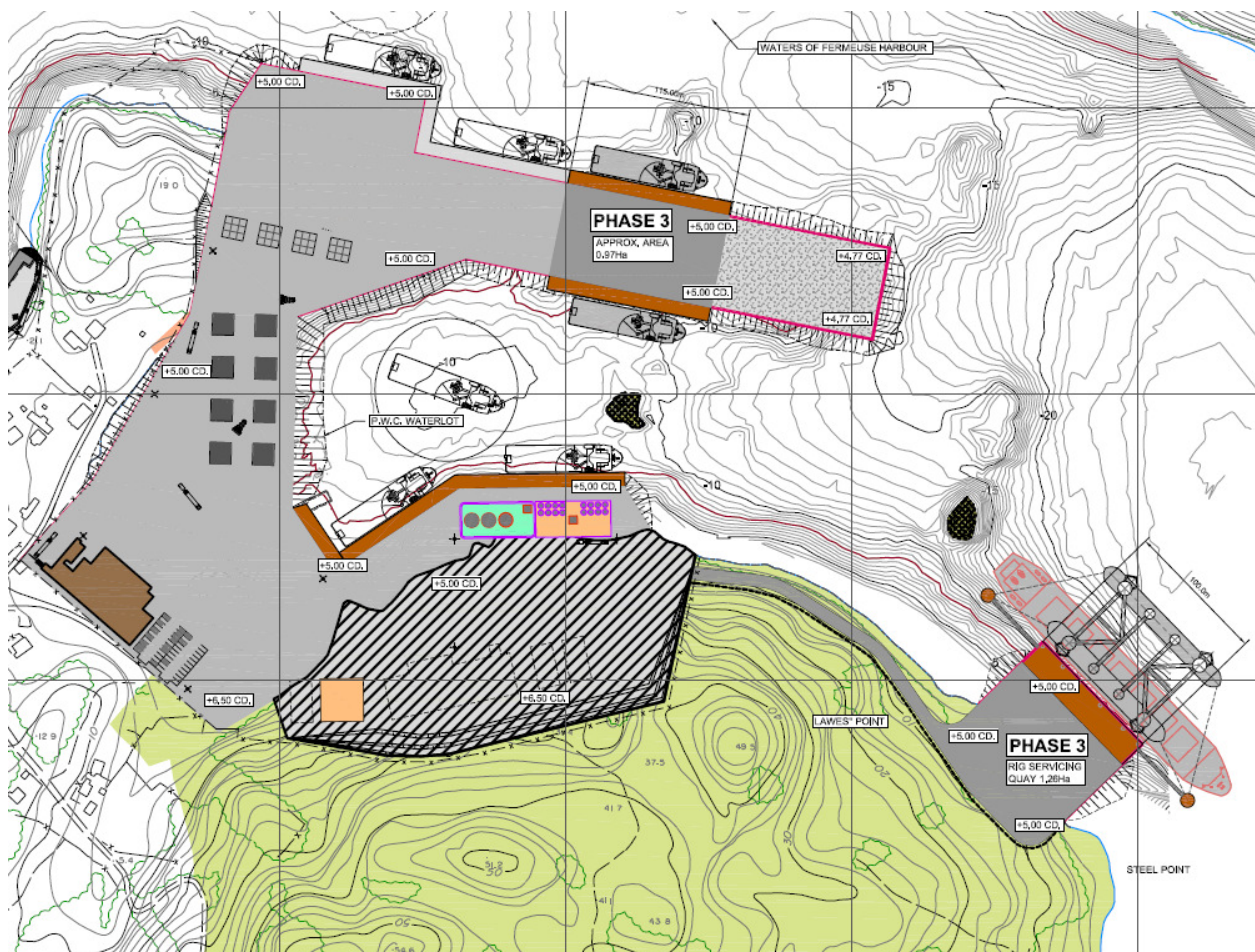


Figure 4.2.3 – Phase 3



#### 4.2.4 Phase 4

The fourth phase of development may include (see discussion – Section 4.3.1):

- Construction of six (6) berths, four (4) with 8.5 metres of draught and two (2) with 10.0 metres draught,
- Development of 4.36 hectares of land for multipurpose use including laydown and general fabrication. Includes 3.25 hectares of land at borrow area shown hatched in Figure 4.2.4.

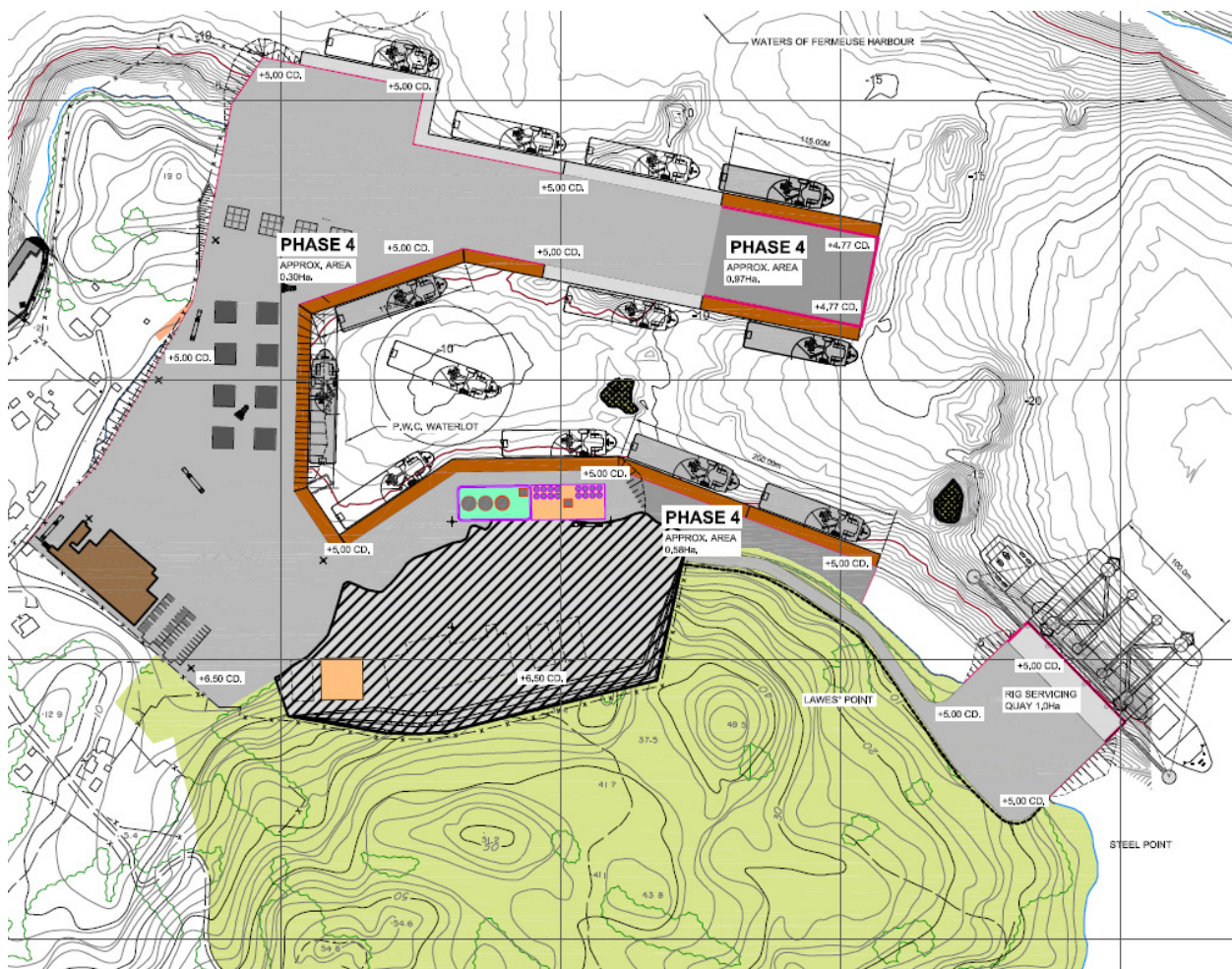


Figure 4.2.4 – Phase 4

### **4.3 CONSTRUCTION**

The construction of the marine base involves demolition of the existing wharf structures in Lumley Cove. Following the demolition and removal of these structures the contractor will begin site clearing, excavation and backfilling as well as phased construction of the new wharf structures. Clearing and excavation onshore will occur only when absolutely necessary to maintain construction schedule and will be kept within the project footprint.

The activities related to construction include:

- Tree cutting, grubbing and clearing;
- Top soil stripping;
- Construction of site road;
- Marine construction (including pile driving);
- Infill behind wharf structures;
- Installation of site services (water, sewer, electrical, fuel, etc);
- Installation of new site buildings (administration, warehouses and fabrication shops);
- Paving and landscaping;
- Transportation.

#### **4.3.1 Construction Period**

The Construction period is envisioned in this document as occurring across multiple phases across the entire project footprint (described in the Section 4.2). Construction is expected to start in late summer/early fall of 2015. The style and pace of development, however, will be influenced by market demands and opportunities. Therefore, it is possible that project construction may not exactly follow the above-described four phases. It is expected that the project will be developed over the course of many years as market demands dictate. Market demand will also dictate which Phases proceed first and to what degree.



Hypothetically, portions of Phase 4 may be developed before Phase 2 or 3 described in Section 4.2. Or, perhaps, the above-described Phase 1 is larger than the market may require in the beginning. As well, development may proceed with further subdivision of phases, e.g., five or more phases instead of four, or phases may be combined or partially combined where advisable. In these respects, the phased development plan described above remains flexible, although the total possible footprint and main activities under this application remain unchanged.

In any case, Phase 1 would include the demolition and backfilling of an existing Small Craft Harbours site between Sheep's Head and Lawe's Point. Preliminary discussions with DFO indicate that it would be favorable to move the berthing space of this site to their newer facility west of Sheep's Head.

All of the phases described include the development of land at the facility. For the majority of this development, backfill will be required to fill in low areas. It is proposed that backfill material be taken from the south side of the development, i.e., Lawe's Point, which is at a higher elevation. Removing material from the south will allow that area to be developed into a usable space.

#### **4.3.2 Potential Causes of Resource Conflict**

Potential interactions with the Project during construction activities may include those associated with:

- Noise
- Fish and Fish Habitat (both freshwater and marine)
- Air Quality (dust)
- Resource Harvesting (eg: fisheries, hunting)
- Birds and Wildlife
- Water Quality (spills)

- **Socio-Economic Environment**

The main hazardous substance that will be hauled on site during construction is diesel fuel. Fuel will be hauled to the project site to supply heavy machinery, namely cranes and earth moving equipment. Hauling of fuel and its presence on site create the possibility of spills on the site, potentially affecting vegetation and the marine environment. The risk of such spills will be minimized by ensuring that all fuel trucks are inspected and compliant to industry standards. Heavy equipment will be fuelled from the fuel trucks. Refuelling will follow accepted industry practices and procedures. All refuelling will occur at designated refuelling sites, away from potentially sensitive areas. Emergency response spill kits will be maintained on site to contain any spill of hazardous fluids.

#### **4.3.3 Environmental Considerations**

Throughout the period of site preparation and construction, particular attention will be paid to the environment to limit any significant and/or long-term alterations to the site with respect to soil and vegetation, wildlife and the marine environment.

Most of the potential effects on the environment related to construction activities such as increased traffic, noise and dust emissions will be of limited duration. Nonetheless, mitigation measures to avoid or minimize the potential impacts of construction will be carefully defined beforehand and applied whenever required. All of the work performed, along with the materials and methodology, will conform to provincial regulations.

During the first phase of construction, the existing Small Craft Harbours wharf will be demolished. The water lot currently owned by DFO will be backfilled and reclaimed into useable land for the facility. There have been previous studies and bottom samples taken at this water lot. Tests and studies indicate that the sea bottom in this area has some amounts of harmful materials present in the existing sediment. Environmentally, backfilling of this water lot is the best option to contain these sediments so that they no longer pose a risk of disturbance and dispersal into the

rest of the harbour. By backfilling with rockfill material and using controlled construction methods, all existing pollutants can be encapsulated by the new backfill.

#### **4.3.3.1 Measures to Avoid Causing Harm to Fish and Fish Habitat**

During construction and operation, it is the owners responsibility to avoid causing serious harm to fish in compliance with the Fisheries Act. The proponent is committed to following the applicable recommendations provided by Fisheries and Oceans Canada (<http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/index-eng.html>) to avoid causing serious harm to fish and fish habitat.

## **4.4 OPERATION**

To ensure minimum impacts occur during daily operations of the offshore marine base, the base will operate in compliance with all required regulations and permits and in accordance with the requirements of the building permit.

### **4.4.1 Operation Activities**

Activities relating to the operations include:

- Marine vessel operations;
- Fabrication;
- Transportation and traffic;
- Storage and handling of bulk materials to supply offshore operations.

### **4.4.2 Operation Period**

Construction is expected to commence in late summer/early fall 2015. Phase 1 has an estimated construction schedule of 12-18 months. The facility is expected to be in operation in late 2016 or early 2017. Subsequent construction phases will be completed based on forecasted market requirements. Construction Phases 2-5 are expected to have construction schedules between 8-12 months.

The facility is expected to have a 30 year operational life. It will be a 24/7, year-round operation.

### **4.4.3 Utilities, Infrastructure and Support Systems**

#### **4.4.3.1 Infrastructure**

In addition to the berths and laydown areas, marine base infrastructure will be required to support and maintain operations.

The marine base set up will require infrastructure to support complete port operations. This will include the following:

- Administration building
- Maintenance shop
- Site drainage
- Site power
- Site lighting
- Site water supply
- Communications
- Site security (fencing)
- Fire Protection
- Site roadways
- Sanitary
- Waste disposal
- Compressed air

#### **4.4.3.2 Site Buildings**

The construction of the site buildings will be a combination of pre-engineered buildings for fabrication, oil field supply services, and maintenance and warehouse type structures to conventional construction for administration type buildings. The buildings will be comprised of concrete foundations, steel framing and metal siding. All buildings will be equipped with electrical and mechanical systems.

#### **4.4.3.3 Site Drainage**

Roadways, wharves and laydown areas will be sloped to provided drainage and prevent the accumulation of water. Individual drainage systems may have to be provided in areas where sloping is insufficient or impractical. Containment areas are required in areas that have a potential for spills of deleterious liquids or materials such as fuel storage areas and any chemical storage facilities.

#### **4.4.3.4    *Water Supply & Sewage***

Potable water will be supplied to the site buildings from the existing town water distribution system. There is an existing sewage outfall at Sheeps Head that will require extension/protection or decommissioning. Sewage facilities will be tied into the existing town system or a new sewage treatment plant will have to be installed to handle sewage requirements if the town system is not adequate.

#### **4.4.3.5    *Site Roadways***

Adequate site roadways will be required to safely handle on-site vehicle traffic including site cranes.

#### **4.4.3.6    *Power Supply and Site Lighting***

A power distribution system will be incorporated into the terminal to supply the various buildings and equipment. Site lighting, will be provided by 30 m masts orientated to provide sufficient light at the berths and in work areas.

#### **4.4.3.7    *Fencing***

To maintain security at the terminal site perimeter fencing will be provided.

#### **4.4.3.8    *Communication Systems***

The marine base will have to be equipped with voice and data communication both internally and to external sources. A sophisticated tracking system will have to be in place for tracking the movement of materials throughout the facility and materials entering and exiting the facility.

#### **4.4.3.9    *Fire Protection***

Site wide fire protection will be provided by a series of hydrants placed throughout the yard and berth area. Individual buildings will be protected by standpipe systems as dictated by the local authorities.

The use of sea-water will be considered for fire-fighting to reduce the demand on the fresh water supply.

#### **4.4.3.10 Waste Disposal**

FEL is committed to ensuring that appropriate waste management be implemented during all phases of the project. A waste disposal system will be established to effectively handle the waste stream from the facility in accordance with the Provincial requirement of the Department of Environment and the requirements of the Town of Fermeuse.

#### **4.4.3.11 Compressed Air**

Compressed air will be provided by a system of onsite compressors and will be used to operate the pneumatic systems for loading solid bulk materials onto offshore supply vessels.

#### **4.4.3.12 Containment Systems**

Containment systems will be required at the fuel storage facility and the chemical storage areas in accordance with the requirement of the Provincial Department of Environment.

#### **4.4.4 Vessel Traffic and Navigation**

The recognized authority for navigational guidelines is the Permanent International Association of Navigation Congresses (PIANC). The selection of appropriate design criteria is a complex task, which requires consideration of several factors including meteorological conditions, environmental conditions, vessel characteristics, etc. Such a detailed analysis is not warranted at this time. It may even require the use of navigation simulators.

For conceptual design, PIANC navigation guidelines were used. Table 2 summarizes the navigational guidelines recommended by PIANC.

**Table 2: PIANC Navigational Guidelines**

Feature	Minimum Width	Minimum Water Depth
Approach channels	5-8B: 1-way 10-15B: 2-way	1.15-1.25D
Turning basins (tug assisted)	2L: Sheltered 2.5L: Less sheltered	1.15-1.20D
Alongside berth	4B	1.15D
Anchorage areas	2-3L: Diameter	1.15D

L, maximum overall vessel length  
B, maximum vessel beam  
D, maximum vessel draft

Applying PIANC's recommendations to the Fermeuse offshore marine base design vessels gives the navigational dimensions in Table 3. Note that a semi-submersible drill rig and the heavy lift vessel were not considered as a design vessel for navigational dimensions. Semi-submersibles and heavy lift vessels will not be part of regular vessel traffic and special navigation criteria as well as transportation weather windows are typically provided by the marine warranty surveyor for the operator when these vessels are brought into the marine base.

**Table 3: Navigational Dimensions Fermeuse Marine Base**

Feature	Minimum Width		Minimum Water Depth	
	Required	Actual	Required	Actual
1-way approach channel	5B 115 m	250 m	1.20D 9.36 m	Varies Min: 10 m
Turning basin	2L 182 m	230 m	1.15D 8.97 m	Varies Min: 10 m
Alongside berth (to centreline)	4B 92 m	115 m	1.15D 8.97 m	Varies Min: 10 m

L, maximum overall vessel length, 91 m  
B, maximum vessel beam, 23 m  
D, maximum vessel draft, 7.8 m

#### 4.4.5 Health, Safety and Environmental Management Systems

##### 4.4.5.1 Scope

A comprehensive Project-specific Health, Safety and Environmental Management System (HSEMS) will be developed at the beginning stage of the project. The HSEMS document provides the Proponent's policy statement and commitments; it defines the Environmental, Health and Safety responsibilities and procedures to be



applied to all project activities from engineering, procurement and construction activities to operations and closure of the facilities for the offshore marine base.

#### **4.4.5.2 Objective**

To ensure that all project activities are carried out in an environmentally-responsible manner, with minimum adverse impact on the environment, human health and safety during all phases of the project.

To ensure that all project personnel, including the owner, their consultants, vendors, contactors, and operators are aware of and understand their environmental responsibilities when conducting their respective activities associated with the Project.

The local environmental conditions will affect, and must be considered in, the design of the project components, the construction methods, and operations and decommissioning of the Project. The Project will be designed and constructed with full consideration of the environmental setting and sensitivities.

#### **4.4.5.3 Relevant Codes and Standards**

Where applicable, the design of the dock structures shall be in compliance with the following standards, codes and design guides.

- AASHTO American Association of State Highway and Transportation Officials
- AISI American Iron and Steel Institute
- ANSI American National Standards Institute
- API American Petroleum Institute
- API RP 2A-LRFD Recommended Practice for Planning, Designing and Constructing Fixed Offshore Platforms – Load and Resistance Factor Design
- API SPEC 2B Specification for Fabricated Structural Steel Pipe
- API 5L Specification for Line Pipe
- ASTM A307 Carbon Steel bolts and Studs

- ASTM A325 Structural bolts, Steel, Heat Treated 120/105 ksi  
Minimum Tensile Strength
- BS 6349: Part 1 : British Standard Code of Practice for Maritime Structures – Part 1 General Criteria
- BS 6349 : Part 2 : British Standard Code of Practice for Maritime Structures – Part 2 Design of Quay Walls, Jetties & Dolphins
- BS 6349 : Part 4 : British Standard Code of Practice for Maritime Structures – Part 4 Design of Fendering and Mooring Systems
- CAN/CSA-S6 : Canadian Highway Bridge Design Code (CHBDC)
- CSA A23.1 : Concrete Materials & Methods of Concrete Construction
- CSA A23.2 : Methods of Test for Concrete
- CSA A23.3 : Design of Concrete Structures
- CSA A23.4 : Precast Concrete – Materials and Construction
- CAN/CSA-S16.01 : Limits States Design of Steel Structures
- CAN/CSA G40.20 General Requirements for Rolled or Welded Structural Quality Steel
- CAN/CSA G40.21 Structural Quality Steels
- CSA S37 : Antennas, Towers and Antenna Supporting Structures
- CISC Handbook of Steel Construction
- CISC Design Guide for Hollow Structural Section Connections and Trusses
- CPCA Concrete Design Handbook
- NBCC National Building Code of Canada
- NFCC National Fire Code of Canada
- NFPA National Fire Protection Association
- Fire Commissioner of Canada FC No. 373 Standard for Piers and Wharves
- OCIMF : Oil companies International Marine Forum
- Permanent International Association of Navigation Congresses (PIANC)
- SSPC Steel Structures Painting Council

- Transport Canada TP 743 : Code of Recommended Standards for the Safety and Prevention of Pollution for Marine Transportation Systems and Related Assessment Procedures (TERMPOL CODE)
- Workplace Hazards Materials Information System (WHMIS)
- Canadian Foundation Engineering Manual

#### Electrical

In accordance with the applicable rules and regulations of the NFPA, the National Electrical Code, OSHA and API RP-500. All material and equipment shall be new and in accordance with UL, ANSI, IEEE, NEMA or applicable Standards.

#### Fire Protection

Fire Protection and Life Safety Systems and equipment in accordance with the best practices of industry. The protection systems shall conform to applicable codes and standards of the National Fire Protection Association (NFPA).

#### **4.4.5.4 Health, Safety & Environmental Management System**

The Proponent's Health, Safety and Environmental Management System (HSEMS) is the principal mechanism by which FEL will integrate the project activities including design and engineering, construction and operation with the environment. The Permitting, Approval and Authorization requirements, Environmental Protection Plan (EPP) and Emergency Preparedness Plan are key elements of this HSEMS and the Proponent representatives, contractors/vendors and other project personnel are responsible for ensuring they are familiar with these requirements.

Detailed Project-specific Environmental Management Plans will be developed as part of the proposed Project Environmental Management System, including, but not necessarily limited to:

- Environmental Protection Plan (EPP) including the following:
  - Waste Management

- Water Management
- Noise and Dust Control
- Air Emission Control
- Marine Safety
- Emergency Preparedness
- Community Liaison

The above EPP will be prepared and implemented for all project activities, i.e., Construction and Operations.

A specific Occupational Health and Safety Plan will also be developed under the HSEMS to ensure the undertaking is carried out in accordance with the *Occupational Health and Safety Act* and *Regulations*. These measures will provide the necessary equipment, systems and tools to ensure a safe workplace is maintained. Proper information, instruction, training, supervision, and facilities will also maintain the health and safety of personnel for all stages of the project.

#### **4.4.5.5 Permits, Approvals and Authorizations**

An initial list of the required permits, approvals and authorizations has been identified (Appendix A). Contractors will submit a list of all required permits, authorizations, licences and certificates to the Company's Representative upon award of contract.

Contractors will be responsible for obtaining all permits, approvals, authorizations and certificates directly related to their contract activities, which were not identified as being the responsibility of the Proponent/Owner or Company's Representative. The Vendors/Contractors will also identify any additional permits, approvals, authorizations and certificates that do not appear on the above mentioned list. The Contractor will submit their respective applications to the Company's Representative, in sufficient time prior to the date required to commence on-site activities.

#### **4.4.5.6     *Documentation***

Documentation submitted in support of, and copies of the permits, approvals and authorizations obtained by the Proponent/Owner, Company's Representative and Contractors will be maintained at the site and at the offices of the Owner and/or Company's Representative.

#### **4.4.5.7     *On-Site Monitoring and Control***

The Contractor including all their sub-contractors/suppliers and associated personnel will be responsible for the implementation and compliance with all conditions specified on the permits, approvals or authorizations and practices and procedures identified in the EPP.

#### **4.4.5.8     *Emergency Preparedness Plan***

As part of FEL's HSEMS, an Emergency Preparedness Plan (EPP) will be developed and implemented during all phases of the Project.

The EPP will provide an appropriate and consistent response to emergency situations that may occur during the construction, operation, and decommissioning of the Project. As stated in FEL's commitment, the proponent is dedicated to making investments in infrastructure to enhance the response capacity to environmental threats or accidents within Fermeuse Harbour.

#### **4.4.6        *Fire Fighting/ Emergency Preparedness***

Emergency Preparedness and fire-fighting will be addressed in the site Environmental Protection Plan. Site plans will be developed in conjunction with the provincial standards and in consultation with the Fire Commissioner and Emergency Measures Office.

Fermeuse shares many municipal services among neighboring towns, including emergency services. The Port Kirwan Volunteer Fire Department services the Town of Fermeuse, and consists of volunteers from Port Kirwan, Fermeuse, and surrounding communities.

#### **4.4.7 Potential Effects on the Environment**

Potential interactions with the Project during operation activities may include those associated with:

- General Safety;
- Noise Impact;
- Visual Impact;
- Land use.

##### **4.4.7.1 General Safety**

As soon as the project is commissioned, all necessary precautions will be taken to ensure safety of people working at or people visiting the site. Strict procedures will be implemented to ensure that the people responsible are properly trained and that procedures are followed. Personal protective equipment (PPE) guidelines and procedures will be implemented including that all workers within 1.2 metres of the water's edge will be required to wear life vests.

##### **4.4.7.2 Noise Impact**

The best method for dealing with a potential noise issue is to use a “setback”, or minimum distance between the areas of highest noise and the nearest residence. That is sufficient to reduce the sound level to an acceptable level.

In addition with using setbacks wherever possible, earth berms will be incorporated into the site development to act as a sound barrier between the site and residences.

##### **4.4.7.3 Visual Impact**

The Project will have a visual impact because the facility will be within the existing town limits. The effect of the impact is subjective and as such varies from one person to another. As much as possible, the supply base will be configured by taking advantage of topography and other site features to minimize the visual impact. Buffer zones will also be created to reduce the visual impact.

#### **4.4.7.4    *Land Use***

Due to safety and security concerns, access to the site will be restricted to persons who are working or engaging in business at the site.

## **4.5 OCCUPATIONS**

There will be employment opportunities in both the construction and operations phases of the offshore marine base in Fermeuse. The following sections outline the expected employment volumes for each phase. Construction employment is shown in person years while operation employment is described as number of jobs created.

### **4.5.1 Construction**

The construction period will require between 25 and 50 people per phase to build site roads, construct wharf structures and site services.

Occupations anticipated to be essential for this project include, but are not limited to:

- Contractors and supervisors (construction trades);
- Crane operators;
- Electrical power line and cable workers;
- Engineers (construction);
- Heavy equipment operators;
- Iron workers;
- Labourers and helpers;
- Truck drivers;
- Welders;
- Carpenters.

### **4.5.2 Operations**

The development plan is based on a benchmark analysis of different supply bases operating around the world, but particularly in Norway where there is a 40 year history of supply base development. For example, analysis of the bases which service the harsh and deep waters of the northern region of the Norwegian Sea is an effective method for assessing future needs.



Normally the activity on a supply base and, therefore, the required number and type of service providers will vary from one oil field to another. Currently offshore Newfoundland we see oil fields that are at an early stage, and more mature fields in the same region.

Global experience indicates that normal supply base activity will result in the need for 25-40 service companies operating out of the base. In the near term we would expect the number of companies operating out of Fermeuse to be at this low end. A benchmark analysis of operating supply bases conducted for FEL projects that a new supply base in Fermeuse will create between 275 and 325 direct jobs over the life of the facility.

## 5 APPROVAL OF UNDERTAKING

The project will be subject to the following federal and provincial environmental legislation. Appendix A contains a preliminary list of permits, approvals and authorizations, including the responsible agency, which may be required to undertake specific project activities. This list will be revised as detail design advances and additional project requirements are identified.

The project schedule shows that approvals and permits must be in place to allow for construction start no later than **June 1, 2015**.

### Government of Canada

- Fisheries Act
- Species at Risk Act
- Migratory Birds Conservation Act
- Navigable Waters Protection Act
- Transportation of Dangerous Goods Act

### Government of Newfoundland and Labrador

- Environmental Protection Act

### Air Pollution Control Regulations

- Water Resources Act

### Environmental Control Water and Sewage Control Regulations

- Endangered Species Act
- Occupational Health and Safety Act
- Boiler, Pressure Vessel and Compressed Gas Act

- Dangerous Goods Act
- Public Health Act
- Urban and Rural Planning Act Schedule

## 6 FUNDING

The development of this project to date has been 100% private sector driven with financing provided by the FEL shareholders. The shareholders recognize that significant additional financial capability will be required to grow the project and are pleased to state that qualified and capable industrial investors are very interested in the opportunity to build a cost-effective offshore supply base in Fermeuse Harbour that will serve the entire North West Atlantic and near Arctic regions.

This project must be driven primarily by private sector investment. It is recognized, however, that the tens of millions of dollars that will be required to create the supply base represents a significant opportunity for indirect job creation and alternative economic developments at the local and regional level. Based on Norwegian experience and recommendations, this business development should be heavily complemented by regional development strategies. In this regard, the proponents will be seeking partnership models and, where advisable, financial support from the Provincial and Federal Governments, not only for direct assistance but especially for supportive local infrastructure for the benefit of the Town and region. Under its investment strategies, FEL also looks forward to actively promoting industry-led or industry-supported innovation projects based on cooperation between the supply base, industry, the university/colleges, and all levels of Government.

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Date

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Signature of Project Director

## 7 REFERENCES

Irish Loop Development Board. Rural-Urban Interaction in Newfoundland and Labrador: Understanding and Managing Functional Regions

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# **Appendix 'A'**

## **Relevant Legislation & Associated Permits**

## Potentially Applicable Provincial and Municipal Authorizations

Government Agency	Permit, Authorization, Approval	Activity Requiring Compliance
<b>Department of Environment and Conservation</b>		
Environmental Assessment Division	Release from Environmental Assessment	General
Water Resources Division	Alteration to a Body of Water (Schedule A to H). This application form is required as well as the appropriate Schedule application form (see below).	Any activity in or near any body of water Permit required for any infilling of any water bodies including marine infilling.
Water Resources Division	Schedule H - Environmental Approval of Other Alterations	Other works within 15 meters of a Body of Water.
Water Resources Division	Certificate of Approval for Site Drainage	Water run-off from the project site.
	Environmental Protection Plan (EPP) – Construction	General
<b>Department of Natural Resources</b>		
Mines and Energy Branch	Magazine Licence	
Mines and Energy Branch	Explosives Transportation Permit	
Mines and Energy Branch	Quarry Permit	
<b>Department of Government Services</b>		
Government Services	Licence to Occupy Crown Land	
Government Services	Certificate of Approval – Storage and Handling of Gasoline and associated products.	
Government Services	Permit for Flammable and Combustible Liquid Storing and Dispensing (Above or Below Ground) and for Bulk Storage (above ground only)	
Government Services	Storage Tank System Application	All Storage Tanks on Site Including Waste Oil Tanks.
Government Services	Compliance Standards – National Fire Code, National Building Code and Life Safety Code	All Buildings on Site.
Government Services	Building Accessibility Exemption	All Building on Site

Government Agency	Permit, Authorization, Approval	Activity Requiring Compliance
Government Services	Statutory Declaration for Registration of Boiler and Pressure Vessel Fittings Fabricated in Newfoundland and Labrador	
Government Services	Contractor's Licence – Pressure Piping System	
Government Services	Examination and Certification of Welders and Blazers	
Government Services	Examination and Certification of Propane System Installers	
<b>Department of Transportation and Works</b>		
Transportation and Works	Compliance Standard – Storing, handling and transporting dangerous goods	General
<b>Department of Human Resources Labour and Employment</b>		
Human Resources Labour and Employment	Compliance Standard – Occupational Health and Safety	Project-related employment
<b>Department of Tourism, Culture and Recreation</b>		
Tourism, Culture and Recreation	Compliance Standard – Historic Resources Act	Construction and operation.
<b>Department of Human Resources, Labour and Employment</b>		
Human Resources, Labour and Employment	Occupational Health and Safety Manual	General
<b>Town of Fermeuse</b>		
Town of Fermeuse	Compliance Standard/ Development Plan	Project Construction and Operation



## Potentially Applicable Federal Authorizations

Government Agency	Permit, Authorization, Approval	Activity Requiring Compliance
<b>Transport Canada</b>		
Transport Canada	Permit to Store, Handle and Transport Dangerous Goods	
<b>Department of Fisheries and Oceans</b>		
Marine Environment and Habitat Management Division	Authorization for Harmful Alteration, Disruption of Destruction (HADD) of Aquatic Habitat	Marine - Wharf construction and marine infilling. Freshwater - any in-stream work that will impact fish habitat.
Marine Environment and Habitat Management Division	Letter of Advice	
Marine Environment and Habitat Management Division	Project Referral	
Canadian Coast Guard	Navigable Waters Protection Act (NWPA)	Wharf Construction or any activity affecting navigable waters.
<b>Environment Canada</b>		
Environment Canada	Compliance Standard – <i>Fisheries Act</i> , Section 36(3), Deleterious Substances	Any project-related water run-off
Canadian Wildlife Service	Compliance Standard, Migratory Birds Convention Act and Regulations	Any activities which could result in the mortality of migratory birds and endangered species and any species under federal authority.