Environmental Preview Report

Forteau Quarry, Wharf and Laydown Area

Submitted to:

Minister
Environment and Conservation
P.O. Box 8700
St. John's, NL
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Prepared for:

Bay Bulls Properties Ltd
650 Water St.
P.O. Box 1083, St. John's, NL
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Prepared by:

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June 04, 2013

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1.0 NAME OF UNDERTAKING

Bay Bulls Properties Ltd. proposes to develop a quarry, wharf and laydown area in Forteau, Newfoundland and Labrador. The project is referred to as the 'Forteau Quarry, Wharf and Laydown Area'.

The undertaking was registered with the Department of Environment and Conservation in September 2012 and a decision rendered by the Minister on January 29, 2013 requiring the completion of an Environmental Preview Report (EPR). Final Guidelines for the EPR were issued on March 19, 2013. This document is submitted in response to the EPR requirement and in compliance with the Guidelines.

2.0 PROPONENT

The following corporate and contact information is provided for the proponent:

Corporate Body:	Bay Bulls Properties Ltd. 650 Water St. P.O. Box 1083 St. John's, NL A1C 5M5
Chief Executive Officer:	Edward Murphy Phone: (709) 782-3404 Fax: (709)334-2123 E-mail: emurphy@pennecon.com
Principal Contact Person:	David Elliott General Manager Phone: (709) 334-2820 Fax: (709)334-2123 E-mail: delliott@pennecon.com

3.0 THE UNDERTAKING

3.1 Nature of the Undertaking

The proposed project involves the development of an approved quarry (approximately 9.5 hectares) plus an additional estimated 7 hectares of land in the Town of Forteau. Site access will be via the Trans Labrador Highway (TLH) and an access road (~ 700 m), which will be developed upon approval. The proponent proposes to develop the area as a rock-loading wharf (~1 hectare) and laydown area (~6 hectares).

3.2 Purpose of the Project

The purpose of the project is to develop an area suitable for the loading of rock from a nearby quarry for future use in local (Newfoundland and Labrador) markets.

4.0 DESCRIPTION OF THE UNDERTAKING

The project is a conventional quarry operation using an approved quarry site, with the added features of a laydown area and wharf to facilitate the loading of a vessel with rock material for marine protection. The site itself has several "designed-in mitigation" features that are worthy of note:

- The project footprint is compact and confined: Approximately 5 ha of the approved 9.5 ha for the quarry will be developed. Approximately 3 ha of the applied 6 ha for the laydown area will be developed and the remainder if deemed necessary. Note these 3 ha are already rezoned and fall within the municipal boundary. This would give a total of about 9 ha of developmental works (including quarry).
- The transport of the produced material will not involve any travel on public roads. This will avoid any of the road surface wear, noise/dust disturbance or traffic congestion associated with high traffic volumes through communities.
- The topographic features of the site will result in minimal visual intrusion from most vantage points.
- Site rehabilitation will be simple and straight-forward, especially given the experience of the Proponent with quarry rehabilitation.
- Local benefits will include a preference for hiring of qualified area residents.
- The Community of Forteau is supportive of the undertaking.
- The Community will have the first right of refusal for the wharf facility at such time as the Proponent declares it surplus to its requirements.

4.1 Geographical Location

The project is located within the municipal boundaries of the Town of Forteau, Labrador, in the electoral district of Cartwright – L'Anse au Clair as shown in Figure 1: Location of Town of Forteau. The site is 5 km east of the community of Forteau and 1 km southeast of the community of English Point via the Trans Labrador Highway (Route 510). To view the geographic location of the project site, see Figure 2: Location of Project Site.

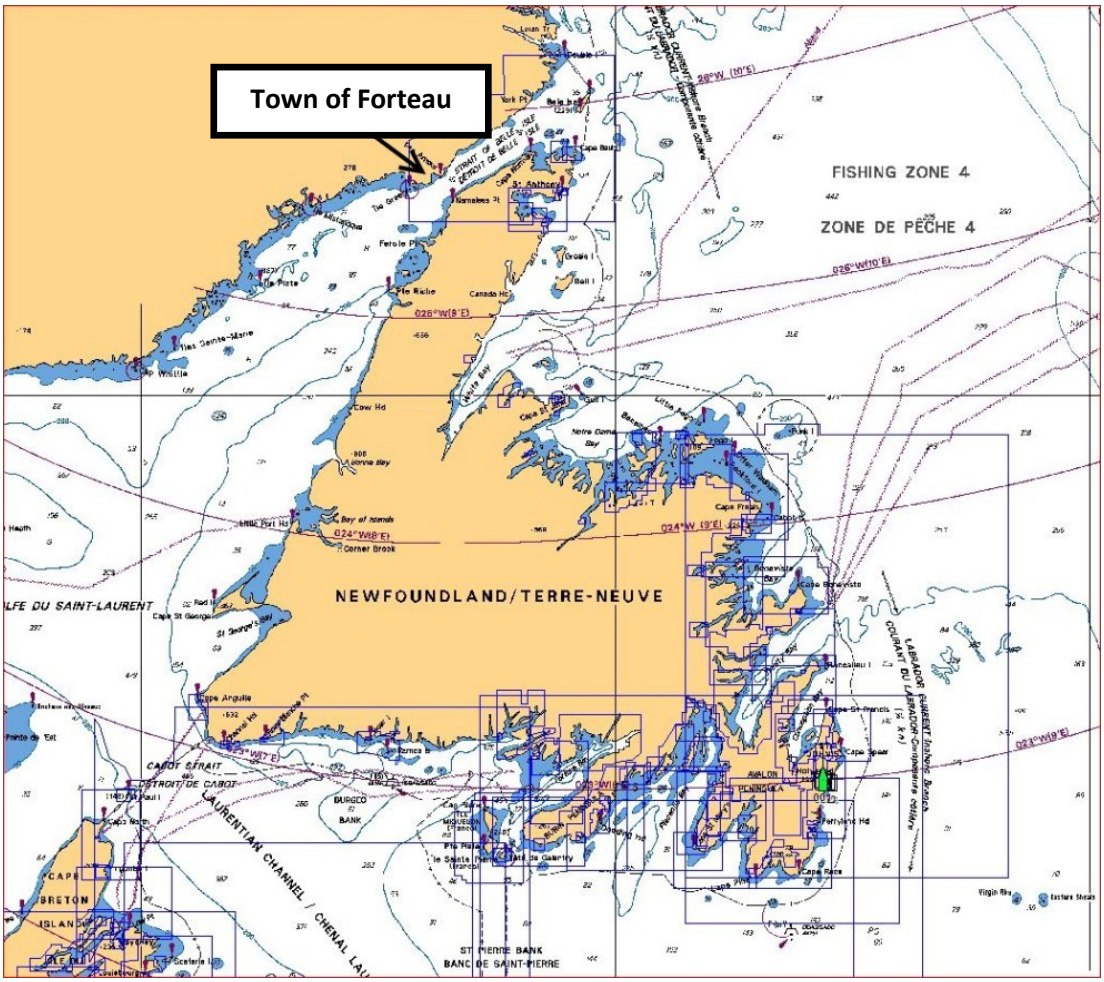

Figure 1 Location of Town of Forteau

Figure 2 Location of Project Site

The land is designated as Industrial and zoned as Industrial Marine in accordance with the Forteau Municipal Plan (Amendment no. 9-2012, and Development Regulations Amendment No. 11-2012). See Appendix A to view the Forteau Municipal Zoning Approval and town approval. The nearest occupied private property is in English Point, approximately one kilometre to the northwest. An active Waste Disposal Site is located immediately west of the site on the North side of Route 510. Note an Environmental Site Assessment has been completed to evaluate potential interactions between the proposed Project and the existing landfill. No negative interaction between project site and landfill site is expected. See Appendix B to view the Proposed Forteau Wharf Site Assessment. A hiking trail along the shoreline traverses the location and will require the development of a detour.

Access to the site is from the Trans Labrador Highway (Route 510). Proximity of site features to Route 510 is estimated as:

- Access road – 0 to 100 m
- Quarry – 100 m
- Laydown Area – 125 m
- Wharf - 200 m

Local topography will greatly reduce the visibility of the site features from nearby vantage points.

4.2 Construction

The construction phase of this project is scheduled to begin in Spring 2014, and will consist of:

- Quarry Development
- Access Road Development
- Laydown Area
- Wharf Construction

All site development activities can be completed in a single construction season. Figure 3 shows all features of the developed site.

4.2.1 Quarry Development

The quarry will be developed on a hillside approximately 90 m above sea level. The location is directly across the TLH from the town landfill. The boundaries of the quarry site are 250 m by 385 m. The developed area will be 2/3 of the site to allow for access, buffer zones, and overburden storage. The location is 51° 28' 34'' N and 56° 34' 34'' W. Appendix C provides images of the proposed quarry development map and dimensions, as well as the quarry permit. Site development will involve minimal grubbing as there is a thin to negligible organic soil layer, little vegetation, and a small quantity of overburden. No tree harvesting or removal of vegetation will be required. All grubbing material will be stored for use in future site rehabilitation. A suitable storage area will be located within the quarry boundaries.

4.2.2 Access Road Development

Access to the site will be from an existing gravel surfaced access road (~300 m), which will be upgraded as required and extended approximately 700 m. Construction of the access road is expected to take approximately four weeks. The access road will be used to transport equipment necessary for construction of the rock loading wharf. The road will

then be used to transport rock from the quarry during the operational phase. Typical construction equipment involves excavators, loaders, bulldozers and trucks. The road does not intersect any surface water features. Ditching will provide adequate side drainage to protect the road surface, therefore no culverts will be installed.

4.2.3 Laydown Area Construction

A minimal amount of grubbing and levelling will be carried out as the proposed laydown area is currently fairly level and free of vegetation or fine overburden. Please see Figure 3: Proposed Wharf Development, which indicates the location of the Laydown Area.

Figure 3 Features of the Developed Site

4.2.4 Wharf Construction

The Rock Loading Wharf is designed to handle vessels less than 25,000 DWT; the marine footprint will be approximately 10,000 m^2. It will consist of two wooden cribs, approximately 12.2 x 12.2 m^2 and 12.5 m deep filled with blast rock. Figure 4: Concept Drawing of Rock Loading Wharf presents a concept drawing of the wharf. Cribs will be constructed on a sloped rock fill launch pad to a height of approximately 3 m. Timber cribs will be constructed of 250 mm x 250 mm x 12.2 m long timber. They will then be launched, towed to the final location, and sunk in position with ballast rock. When cribs are firmly seated on the bottom, they will be built-up to the final elevation, leveled if necessary, and completely filled with ballast rock. Ballast rock will range in size from 250 mm – 500 mm and will be placed by an excavator from a barge.

The construction of the rock loading wharf will take approximately five months. The location of wharf is 51°28'42.03"N, 56°55'17.65"W in WGS84 Map Datum.

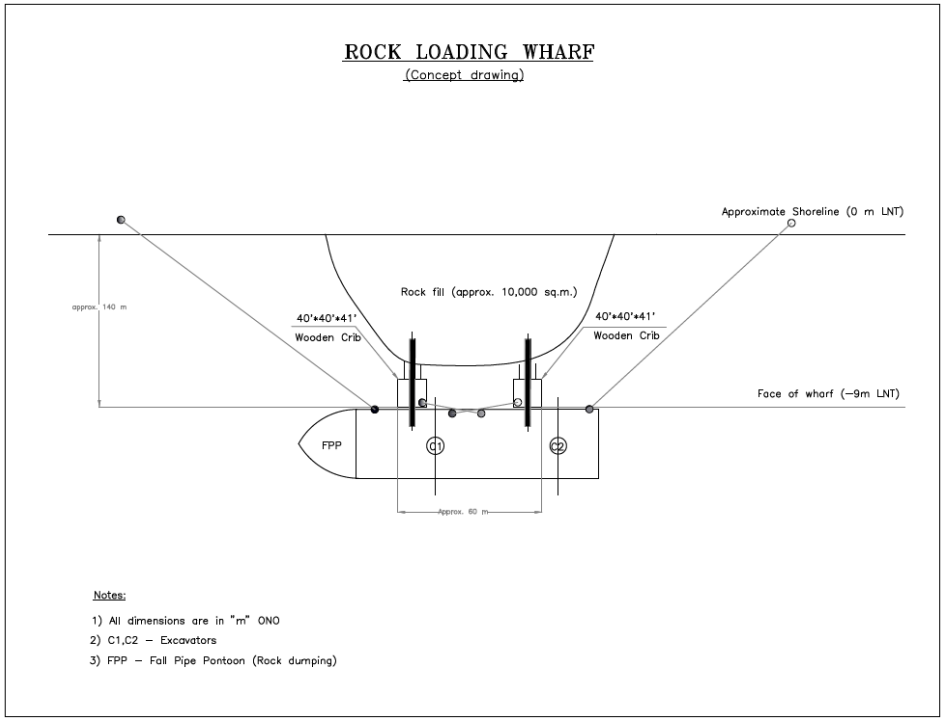

Figure 4 Concept Drawing of Rock Loading Wharf

4.3 Operation and Maintenance

The operational phase of this project is scheduled to begin in 2014, and will consist of:

- Blasting and Crushing
- Truck Haulage
- Storage and
- Vessel Loading

Blasting/crushing, truck haulage and storage will take place over the two year operation period. Vessel loading will take place during year two of operations. Each aspect of the operation is described below.

The operation will use a fleet of heavy equipment comprising of:

- One Tracked Air Drill
- Four Loaders – (CAT 980, 988 or equivalent)
- Four Trucks – 60 tonne
- Conveyor Belts
- A Mobile Crusher

Other site features and facilities will include:

- Portable Diesel Generators and Lighting (Wharf Area)
- Office Trailer/Washroom Facility
- Refueling Station, Mobile Equipment Servicing

4.3.1 Quarry Operation

The quarry operation will consist of drilling, blasting, loading and transport of rock. The quarry pit will be developed in a single 10 m bench with access from down gradient to take advantage of the natural topography. Water will be applied for dust suppression as conditions require.

A tracked air drill will drill a pattern of holes on a 14 x 14 ft. (4.5 x 4.5 m) grid to a depth of 10 m. Each completed hole will be capped off until prepared for blasting.

Blasting will be carried out once an adequate area of drilling has been completed. Each blast will produce an estimated 250, 000 tonnes of material. A total of 3 - 4 blast events will be required – a maximum of two per work season. Blast timing will be established through consultation with the community.

No washing will be required, however water may be used as required for dust control.

4.3.2 Haulage

Two to three Front end loaders will move the blast material and load trucks. A fleet of four 60 t. trucks will transport the rock over the 0.7 km haul distance between the quarry and the laydown area.

4.3.3 Vessel Loading

Vessel loading will be intermittent compared to the quarry operation. The anticipated requirement will be for approximately 35 vessel loads over a single operating season (year two), with each loading operation taking less than 24 hours. Front end loaders will access the stockpile and feed the conveyors and maintain a high loading rate to minimize dockside time for the ship.

4.3.4 Equipment Maintenance and Repair

Equipment will be maintained on site, with a designated area for servicing, refueling and repairs. A site Environmental Protection Plan (as per Standard Operating Procedures) will be in place and overseen by a site Health, Safety and Environment Advisor. Spill Preparedness procedures will be applied, including provision for responding to incidental leaks and spills. Spill Kits, Safety Training, Standard Operating Procedures, and PPE will all be applied to avoid incidents and to respond adequately in the event these occur.

5.0 ALTERNATIVES

Possible alternatives available to the Proponent include other potential or existing quarry sites in the Labrador Straits. In all cases, the possible other sites involve a larger environmental footprint, safety concerns, and greater cost for development and operation. For quarries along the TLH, haulage would be required along the public highway and through communities. All haul distances for project alternatives would be orders of magnitude greater than the proposed undertaking (less than one km over a site road). As a result, all alternatives will involve traffic congestions, noise and dust and increased wear on highway surfaces, as well as higher levels of fuel consumption (and associated generation of airborne emissions). Additionally, each of these factors increases the cost of the alternative to the proponent and reduces the economic viability of the proposed undertaking.

None of the available alternate quarry sites have an adjacent marine site/laydown area that would be suitable for wharf development. The proposed site is ideal in terms of an available laydown area and adjoining wharf site that is suited to the project requirements.

In terms of technical, economical, safety, and environmental criteria, the Proponent has concluded that there are no feasible safe alternative locations available to them for this undertaking.

6.0 POTENTIAL ENVIRONMENTAL EFFECTS AND MITIGATION

This section provides more detailed information regarding the effects and proposed mitigation on the issues identified by the Minister and described in the EPR Guidelines. Note, the public consultation meeting did not identify any additional issues or concerns.

In addition to a description of each issue and the proposed mitigation measures that will apply, a conclusion is reached as to the residual effect of the project on the environment.

6.1 Community Effects

While the project is within the municipal boundaries of the Town of Forteau, it is in a designated industrial zone and located a minimum of 1 km from the nearest residence. Noise and dust from the operation will not be evident to residents, both because of the available buffer distance, as well as a result of the prevailing winds. As shown in Figure 5 (Wind Roses (for the Strait of Belle Isle)) the prevailing winds during all seasons will direct both noise and dust to the east and northeast, i.e. away from area residents. Note that the current plan for quarry development will result in a maximum of two blasts per season. The community will be consulted on the timing for each blast, and notification/warning will be provided in advance of each event. Based on experience elsewhere, a likely timing for each blast would occur early in the evening. The site will not be visible from the residential area of the community, nor would effects such as disruption of water wells extend over such a distance.

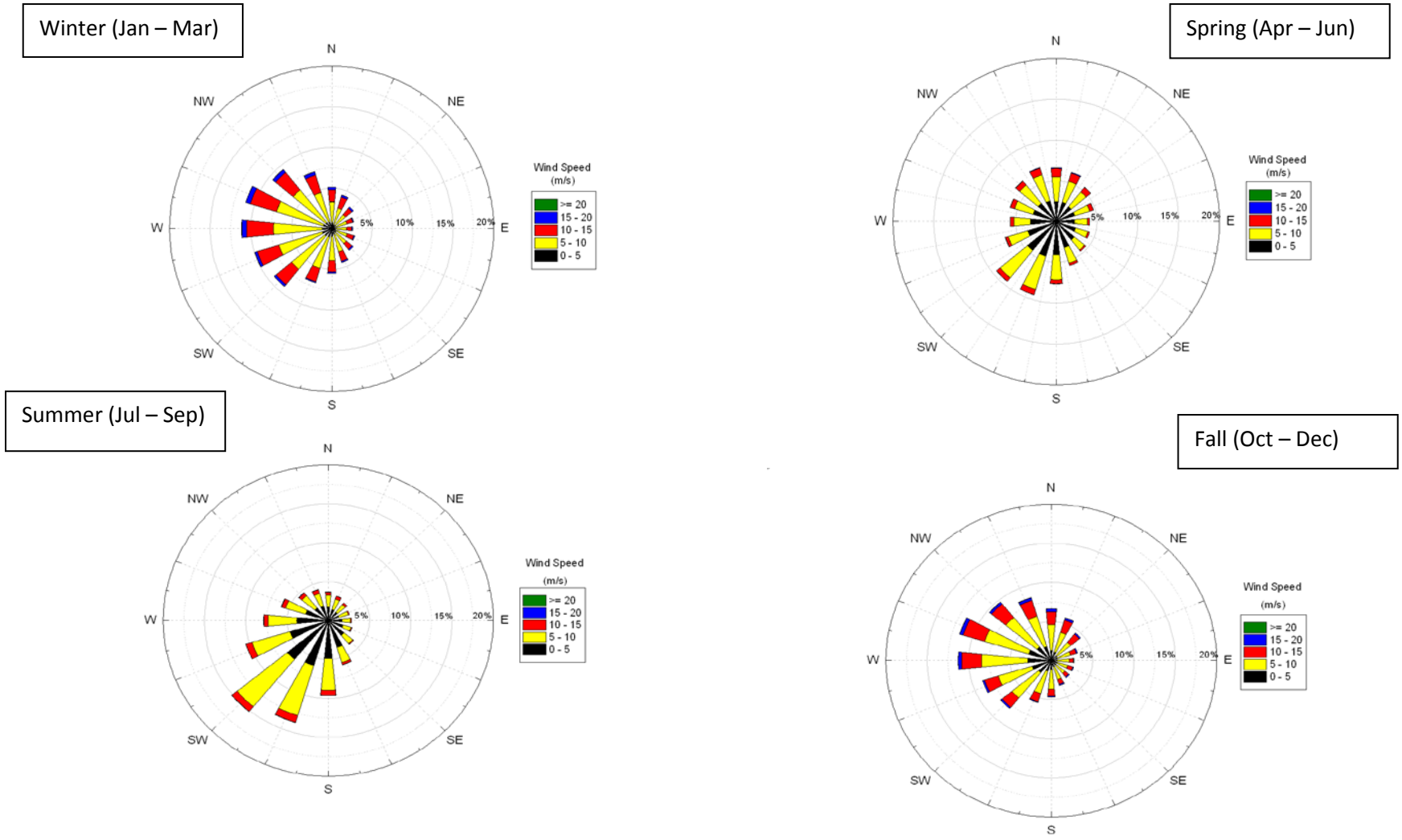

Figure 5 Wind Roses

Reproduced from Figure 3-10 in *Marine Fish and Fish Habitat in the Strait of Belle Isle: Information Review and Compilation*, a report prepared by Sikumiut Environmental Management Novermber 10, 2010, St. Johns, NL

Figure 6 (a,b,c, and d – Selected Views of the Project Site) provides an indication of the viewshed effect of the proposed facility. As seen in Figure 6a the only view available to residential property is from across the bay. The photograph in Figure 6b was taken from the Forteau Wharf. At a distance of over 2.5 km, the view along the shoreline will likely discern the wharf, but it will be difficult to see the laydown area or the quarry. A vessel at dock will be quite visible, but not likely to be regarded as a negative feature of the landscape.

The environmental effect of the Project on the community of Forteau/English Point with respect to residences, structures, water wells, noise and visual intrusion is predicted to be negligible.

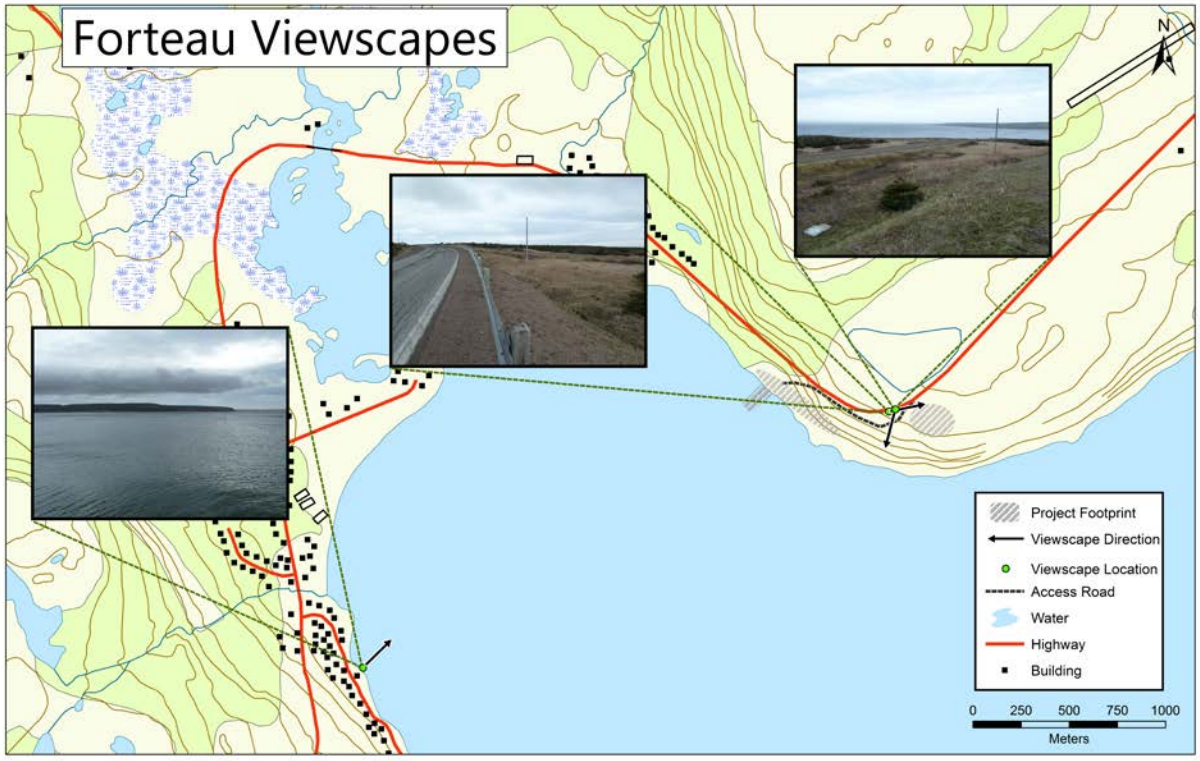

Figure 6A Selected Views of the Project Site

View A Looking From The Town of Forteau

Figure 6B View from Forteau Wharf

View B Looking North on Highway 510

Figure 6C North View

View C Looking South on Highway 510

Figure 6D South View

6.2 Hiking Trails

The Pioneer Footpath Trail is the only trail that occurs within the project area. This hiking trail runs along the coast of Southern Labrador in two different phases; the first phase runs from Lanse-au-Clair to Pinware, and the second phase runs from Pinware to Red Bay. The total distance of the trail is approximately 75 km, and would take about 20 hours of hiking to complete (based on a moderate walking pace). Please see Appendix D for more information about the Pioneer Footpath Trail.

The Wharf and Laydown Area would intersect a 2 km section of trail, which could cause people to avoid walking on this section. To mitigate this effect, the Proponent will place signage at the road accesses for the trail advising people to bypass the section. The proponent proposes a detour for this section; there is an existing parking area at either side of the proposed detour, so notice of the detour will be easily seen. This effect will only occur during the Construction and Operation phases of this project, which will be about 3 years. Once the Project is completed, and the site rehabilitated, an easement will be established along the existing route of the trail.

The environmental effect of the Project on the Pioneer Footpath Trail is predicted to be minor but short term and fully reversible.

6.3 Archaeological Sites

There are three sites identified as having archaeological significance in the area of the project. A Historic Resources Overview Assessment (HROA) was carried out by Gerald Penney and Associates Ltd., (Appendix E) and it was noted that the proposed quarry location and test pitting, in the vicinity of the proposed wharf area and the route of the access road, exposed no historic resources. The three identified sites having archaeological significance were found in the southeast end of the project area.

To mitigate the effect on the identified archaeological sites, the Proponent was advised by the Provincial Archaeology Office to leave a buffer zone of 20 m on the two sites located in the

laydown area, and to avoid ground disturbance. These two sites will be clearly marked with brightly coloured marking tape and no ground disturbance will be done within the buffer zone. The third site, located within the proposed access road, will be fully recorded, systematically dismantled and stored in a secure area as identified by the PAO. See Appendix F for a copy of the letter from The Department of Tourism Culture and Recreation, Provincial Archaeology Office.

The environmental effect of the Project on archaeological sites is predicted to be negligible.

6.4 Shoreline

The site to be used for the Laydown Area is located on a barren, rocky shore (see Figure 7, note, wooden markers show the high water mark). The rock is very coarse and there is little to no vegetation. There will be another layer of rock placed on top the existing rock for the purposes of the laydown area. The rock will be removed once the project is completed. Please refer to Appendix B, Proposed Forteau Wharf Site Assessment, for a further description of the shoreline area.

The Department of Fisheries and Oceans has indicated there will be no Harmful Alteration, Disruption or Destruction (HADD) of fish habitat on the shoreline to be used for the Laydown Area. The project will not likely result in impacts to fish and fish habitat provided that the standard mitigation measures be applied. See Appendix G to view a copy of the letter from DFO.

The environmental effect of the laydown section of the Project on the shoreline at Crow Head is predicted to be minor and short term in duration.

Figure 7 Shoreline Laydown Area

6.5 Trans Labrador Highway/Route 510

One of the major advantages of this Project is the self-contained nature of the operation. No heavy vehicle traffic will occur on Highway 510 or any other public road. The quarry boundary will be well clear of the boundaries of Route 510 in part due to the location of the site access road. Of course, all required setback limitations will be observed as per quarry permits. To view the quarry permit, please see Appendix C. Additionally, the topographic features of the site will reduce or eliminate views of the site as seen from the highway. Figure 6: a, c and d show the view available of the site as seen from Route 510 (c = northbound, d = southbound). The laydown area and wharf will not be visible at all because of the relative elevation of the road. A brief view will be available to the traveller of the local site road and the boundary of the quarry. Again however, the visibility of the quarry will be restricted by the topography. It is worth noting that the view along this section of Highway 510 is dominated by the presence of the Waste Disposal Site on the northwestern side of the highway.

As noted previously, the prevailing winds and the available topographic features of the landscape will reduce noise or dust effects not only for the community, but also along the highway.

The environmental effect of the Project on Route 510 (Trans Labrador Highway) is predicted to be minor to negligible.

6.6 Tourism Sites/Scenic Settings

There will be very little interaction between the Project and tourism sites or scenic settings, other than along the Pioneer Footpath Trail. The likely interactions have been considered and described in sections 6.2 and 6.5 above.

As shown in Figure 6, the effect on the available scenic settings is minimal, in large measure due to the compact nature of the site as well as the topographic features of the shoreline and backshore.

The proposed detour for the Pioneer Footpath Trail may result in views by hikers as well as vehicles along a short (approximately 1 km) section of the highway as described in Section 6.5. The Project will not be visible from other sections of the trail. Once the detour has been removed and the trail re-established, the quarry will not be visible from the trail; the laydown area will be fully rehabilitated, and the view will be little changed.

The environmental effect of the Project on Tourism Sites/Scenic Settings is predicted to be minimal and short term in duration.

7.0 PUBLIC INFORMATION MEETING

An Open House Public Information Session was held on May 28, 2013, at 5 pm at the John A. Dumaresque town centre in Forteau, NL. As laid out in the Guidelines for the Environmental Preview Report, the purpose of this meeting was to present the public with the information pertaining to the project, and to also answer any questions about the project. The session was set up as an Open House format, and anyone from the public could attend. At the request of one attendee, a sit down session was held when attendance was at a peak (approximately 30 persons present). Following the presentation (introduction of the Proponent, explaination of the environmental assessment process, description of the project, identification of issues to be addressed in the EPR), a question and answer period occurred. Once all had the opportunity to speak, the meeting reverted to the Open House style meeting.

Four different 2 x 3 ft posters were set up (please see the Public Information Session Report contained in this document in Appendix H), and each poster had a Proponent member to explain the poster and answer any questions from the public. The posters were titled:

- The Proponent,
- The Project,
- The Environmental Assessment Process, and
- Issues to be addressed in the Environmental Assessment

It is notable that no additional issues or concerns were identified by those present, and there appeared to be general acceptance of the approach taken by the Proponent to addressing the identified issues. There was a clear statement of support for the Project on behalf of the town council, and a high level of interest in employment and contracting opportunities. Appendix H contains the report on the Public Information Session.

8.0 PROJECT - RELATED DOCUMENTS

The following is a list of all project-related documents already generated by, or for, the Proponent:

- Registration

  Bay Bulls Properties Ltd., *Environmental Assessment Registration Document: Proposed Rock Loading Wharf and Laydown Area*, September 2012, St. John's, NL. Vol. 15 p.

- EPR Guidelines

  Hedderson, Tom. F*inal Guidelines for Environmental Preview Report for the Forteau Quarry, Wharf and Laydown Area*, Department of Environment and Conservation, March 19, 2013, Newfoundland and Labrador, Vol. 1. 6p.

- Historic Resources Overview Assessment

  Gerald Penney and Associates Limited, *Forteau Marine Base, Historic Resources Overview Assessment*, *Archaeological Investigation Permit #12.39*. October 15, 2012. St. John's, NL. Vol. 1. 28 p. (Appendix E)

- Site Assessment

  Sikumiut Environmental Management Ltd., *Proposed Forteau Wharf – Site Assessment,* September 28, 2012. St. John's, NL. Vol. 1. 10p. (Appendix B)

9.0 APPROVAL OF THE UNDERTAKING

The following table lists the various permits, licences, approvals and other forms of authorization required for this project. The following have been identified and are listed below (with status, as appropriate):

APPROVALS/CERTIFICATE/PERMITS	REGULATORY AUTHORITY	STATUS
NL Environmental Assessment Registration	NL Department of Environment and Conservation, Environmental Assessment Division	Done
Fish Habitat Approval	NL Department of Fisheries and Oceans Canada, Habitat Protection Division	Received
Application to Alter a Body of Water	NL Department of Environment and Conservation, Water Resources Management Division	TBD
Navigable Waters Protection Approval	Transport Canada	Submitted
Lease / Permit to Occupy Crown Lands	NL Department of Environment and Conservation, Crown Lands Division	Submitted
Quarry Permit	NL Department of Natural Resources	Received
Archaeology Letter	NL Department of Tourism, Culture and Recreation, Provincial Archaeology Office	Received
Approval for Rezoning	NL Department of Municipal Affairs, Engineering and Land Use Planning Division	Received
Crown Lands Application – Laydown and Wharf Area	NL Department of Environment and Conservation, Crown Lands Division	Submitted

Note: the department of government services, municipal affairs, and water resources division have also approved this project.

10.0 DECOMMISSIONING AND REHABILITATION

The Wharf, Laydown Area, and Access Road will remain under the management and ownership of the Proponent (BBPL) after the completion of the project for possible future business opportunity. The Town of Forteau will be given the first right of refusal before the Wharf, Laydown Area and Access Road are decommissioned. BBPL will restore the Pioneer Footpath Trail within the work site, and provide an easement for this trail.

Once the project site is no longer required for operations (subject to any successor taking on all or part of the operation), the site will be rehabilitated to applicable standards. Note, during operations, planning will include provision for future decommissioning and for progressive rehabilitation. For example, all quarry and site grubbing will be stockpiled within the site boundaries and kept available for site restoration.

For complete site rehabilitation, the following actions will be taken:

- the site will be cleaned of any debris or garbage;
- all equipment and supplies removed from site;
- contouring will be completed by rock removal or infill to achieve acceptable slopes;
- organics will be placed in areas requiring re-vegetation;
- as appropriate, fertilization, seeding or planting will be completed to encourage re-growth; and
- where required, signage and fencing will be installed.

For the Laydown Area along the shoreline, and all aspects of the site that overlap the Pioneer Footpath Trail, the Labrador Straits Historical Development Corporation (LSHDC) will be consulted to ensure that the timing and nature of the required work is carried out in a satisfactory manner. Any residual rock inventory from the Laydown Area will be removed and placed in the quarry or other suitable location. All padding will be removed to bring the shoreline to pre-existing slope and grade. A suitable travel surface will be placed along the trail as required to facilitate hiking. Any appropriate signage will be put in place as agreed with the LSHDC.

With respect to the Quarry, progressive reclamation is part of the standard conditions of the quarry lease. These terms require that quarry operators slope mine out areas and preserve and re-spread the original organic material from the site. The BBPL reclamation policy goes well beyond the requirements of the lease. Surficial soils, subsoil and grubbing are stripped to prepare each excavation phase. These materials are first used to construct perimeter berms. Then, as required, it is utilized to cover the reclaimed areas. The sloping requirement is achieved by leaving a buffer of aggregate in place along the quarry boundary containing a sufficient volume that when re-contoured with a dozer, the pit-face of the mined out area can be sloped to the required 30 degree angle. Following final sloping, the preserved organic material and subsoil is spread, and the area will be reverted to its best natural state.

A report will be prepared on the final closure and submitted as required for approval.

Appendix A

Forteau Municipal Zoning Approval

TRIM COR : 2012 04565-05

Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Municipal Affairs
Engineering & Land Use Planning Division

July 16, 2012

Ms. Gail Flynn
Town of Forteau
P.O. Box 99
Forteau, NL A0K 2P0

Dear Ms. Flynn:

RE: FORTEAU
Municipal Plan Amendment No. 9, 2012
& Development Regulations Amendment No.11, 2012

I am pleased to inform you that the Town of Forteau Municipal Plan Amendment NO. 9, 2012 and Development Regulations Amendment No. 11, 2012 as adopted by Council on the 5th day of June , 2012, has now been registered.

Council must publish a notice in the Newfoundland and Labrador Gazette within 10 days of this letter. The Amendment comes into effect on the date that this notice appears in the Gazette. The notice must also appear in a local newspaper. I have enclosed a notice template to assist Council in the preparation of this notice.

The Newfoundland and Labrador Gazette is published every Friday. Notices must be submitted a week in advance. Council can submit the notice by email (queensprinter@gov.nl.ca), by fax (729-1900) or by mail (Queen's Printer, P.O. Box 8700, St. John's, NL, A1B 4J6.

Council's registered copy of the Amendment is enclosed. As it is a legal document, it should be reserved in a safe place.

Yours truly,

Corrie Davis, MCIP
Manager, Land Use Planning Division

Encls.

cc: Arvo McMillan, MCIP

P.O. Box 8700, St. John's, NL, Canada A1B 4J6 Tel: (709) 729-3090 Fax: (709) 729-0477

Town Of Forteau

March 13, 2013

Bay Bulls Properties Ltd.
650 Water Street
St. John's, NL
A1C 5M5
Atten: David Elliott

Dear Sir:

The Forteau Town Council are in agreement with a quarry permit for Crow Head, Forteau and have completed the necessary re-zoning of the area at Crow Head to Industrial Marine.

As previously mentioned we expect that the Pioneer Footpath will be left in as good as or better than condition then it is in now and that it will be returned to the town upon completion of the project. Also that you provide the town with the in-kind contribution of 20,000 tons of 2 inch minus rock and possibly 1,200 tons of 2 to 4 ton rock at the quarry.

Also we are requesting that you pay the total cost of the re-zoning of the area at Crow Head, as this is a policy of Council that the party who makes this request be totally responsible for the cost of the re-zoning.

Yours Truly,

Terry Hancock
Deputy Mayor

P.O. BOX 99 • FORTEAU, NL. • 11-13 MAIN STREET • A0K 2P0 • TEL: 709 931 2241 • FAX: 709 931 2037
email: gflynn2006@hotmail.com

Appendix B

Proposed Forteau Wharf Site Assessment

Proposed Forteau Wharf - Site Assessment

Prepared by:

Sikumiut Environmental Management Ltd.
175 Hamlyn Road, P.O. Box 39089
St. John's, NL
A1E 5Y7

Prepared for:

Pennecon Ltd.
1309 Topsail Road, P.O. Box 8274, Station A
St. John's, NL
A1B 4N3

28 September 2012

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1.0 THE UNDERTAKING

The proposed undertaking involves the development of a wharf (approximately 1.05 hectares), associated laydown area (approximately 6 ha) and access road within the boundaries of the town of Forteau, Labrador. The site is approximately 5 km east of the town of Forteau and approximately 1 km southeast of the community of English Point both via the Trans Labrador Highway. The site is accessible via a hiking trail off the Trans Labrador Highway which leads to the northern portion of the site. The proponent proposes to develop the site as a loading dock in order to supply aggregate for various projects.

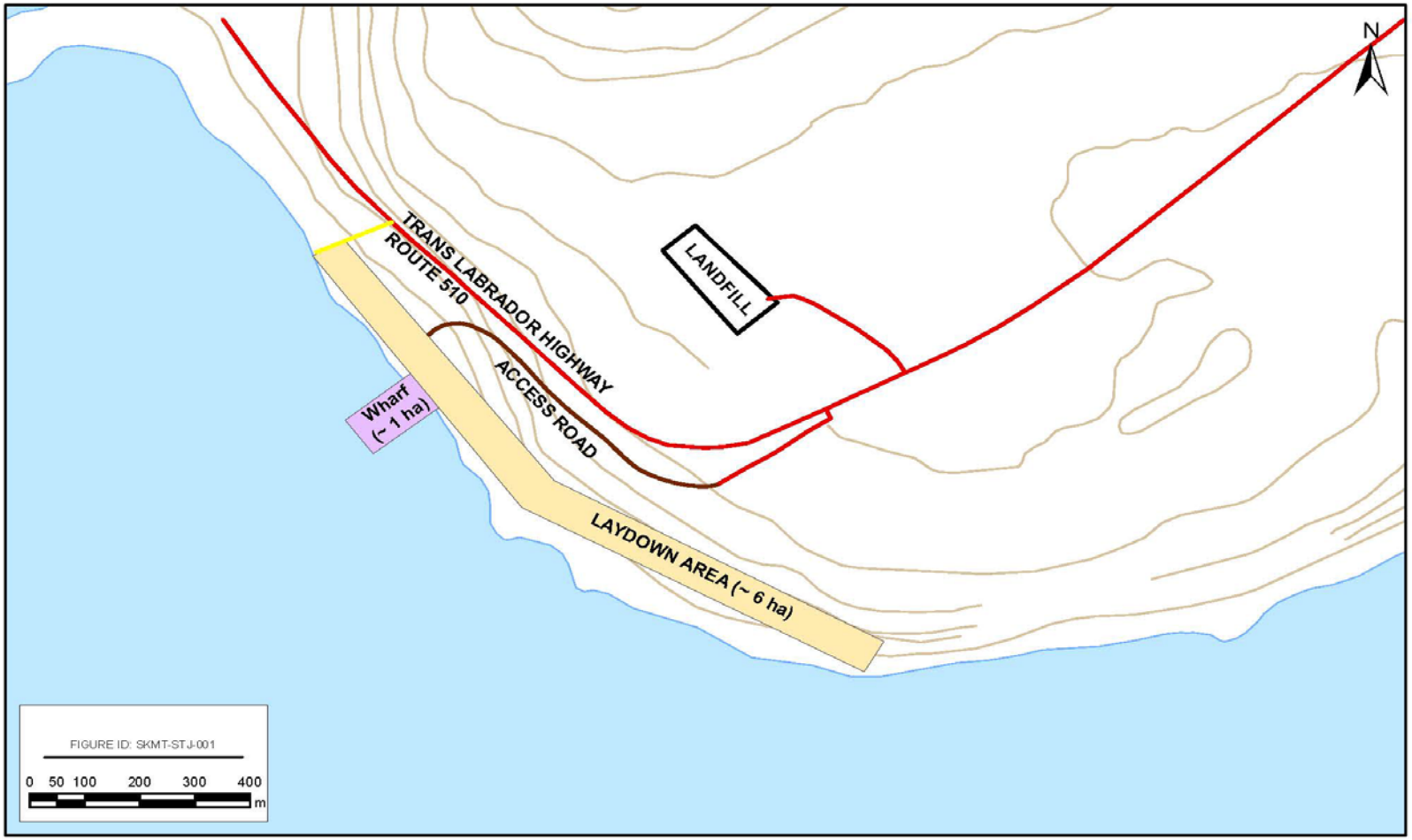
An existing active landfill is located on Route 510, approximately 700 m northeast from the proposed wharf. This infrastructure is presented in Figure 1.

2.0 SCOPE

This document describes the proposed undertaking and outlines the potential effects of the undertaking on the existing landfill within the area and vice versa. Mitigation measures are proposed to minimize any effects. This document is based on a site assessment carried out on September 24, 2012 and was developed to fulfill a requirement of the Department of Government Services (Government of Newfoundland and Labrador Guidance Document – Development within Landfill Buffer Zone).

3.0 SITE DESCRIPTION

The proposed site is located within the Forteau Barrens Ecoregion of Labrador, which is generally characterized by poorly drained soils and pockets of scrubland, barrens and slope bogs dominating the landscape. The proposed wharf and laydown area are located on a barren rocky shore with wooden markers placed to note the high water mark (Figure 2 and Figure 3). North of the site the area is dominated by low lying vegetation such as blueberries (*Vaccinium sp.*) and low lying shrubs. Patches of White Spruce (*Picea glauca*) and Black Spruce (*Picea mariana*) are also present at the foot of the embankment (Figure 4). No signs of development were observed on the wharf and laydown area. No visible signs of a watercourse or groundwater upwelling were noted on the site. A review of topographic mapping and aerial photos supports these findings.



PREPARED FOR: PENNECON LIMITED	FORTEAU SITE ASSESSMENT	PREPARED BY: Sikumiut Environmental Management Ltd.
FIGURE NO: FIGURE 1	LOCATION MAP	DATE: 28/12/2012

Figure 2 Southeast View of the Proposed Wharf and Laydown Area

Figure 3 Northwest View of the Proposed Wharf and Laydown Area

Figure 4 View of the Vegetation North of the Wharf and Laydown Area

The nearest watercourse is a small intermittent stream which is located approximately 1.2 km east from the proposed wharf. This watercourse appears to be surface run-off fed and is only wetted during periods of high flow and spring melt. Based on the review of topographic mapping and aerial photos, this watercourse appears to flow south towards Forteau Bay.

A culvert is present approximately 135 m to the west of the wharf site and it is connected to the roadside ditch on the east side of Route 510 (Figure 5). This culvert allows the water to drain down the embankment and into a patch of spruce. There was no evidence of this runoff continuing as a watercourse and draining towards the site.

As previously stated, the existing landfill lies approximately 700 m northeast of the proposed wharf (Figure 1). The landfill is currently active and has been in operation for over 25 years. Waste is collected using a pick-up truck and trailer from the communities of Forteau, L'anse au Claire, L'anse au Loup, Capstan Island, Pinware and West St. Modest. The landfill collects all the waste from these communities with the exception of scrap metal, appliances and tires, which are collected by a separate enterprise. Waste collection occurs Monday through Wednesday year round. Once waste piles have reached a certain size, a loader is brought to the site to redistribute the waste in the landfill. During the forest fire season, the landfill is only open to the public during set hours. Hatch Mott MacDonald has been retained to conduct a study to find a new location for a landfill. The goal is to have a new landfill fully operational by 2020 (G. Flynn, 2012, pers. Com.).

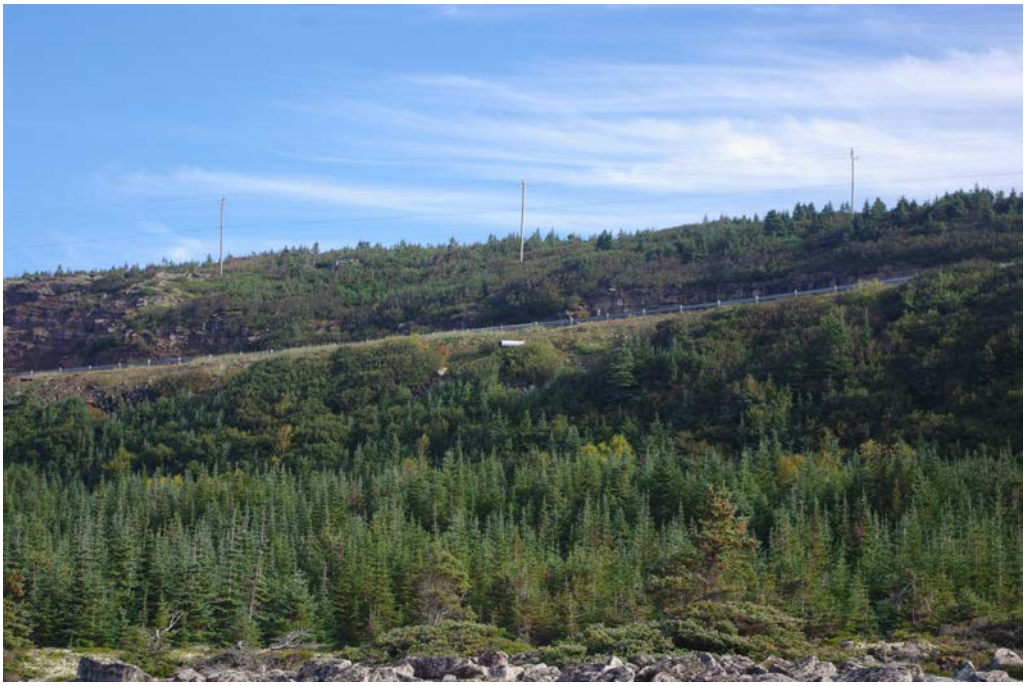


Figure 5 Roadside Culvert Located 135 m West of the Wharf

The area surrounding the landfill is barren with occasional patches of vegetation present. To the west of the landfill is a cliff face, created by the blasting required for Route 510 construction. Also to the west are a series of drainage ditches and berms that do not appear to have a discharge point (Figure 6). No watercourse, or groundwater upwelling were noted at the landfill. The landfill is located near the top of a hill and is upgradient from the wharf. Runoff may flow east or west due to the topography of the landfill site, however the steepest gradient is towards the east, away from the landfill and the wharf and laydown area. Groundwater is also anticipated to flow east into a valley and no groundwater discharge was observed along the cliff face. Given the topography of the local area, no runoff or groundwater from the landfill is anticipated to reach the proposed wharf site. The landfill is displayed in Figure 7.

Figure 6 Drainage Ditches and Berms Southwest of the Landfill

Figure 7 Landfill Site

4.0 SITE DEVELOPMENT AND OPERATIONS ACTIVITIES

Site development for the wharf will involve some vegetation grubbing and the removal of boulders. The creation of the access road may require blasting and grading in order to achieve the appropriate slope.

The wharf will be used for loading aggregate materials onto vessels. Heavy equipment will be used to transfer the aggregate material from the laydown area to the vessels.

5.0 POTENTIAL ENVIRONMENTAL EFFECTS

5.1 Potential Effects of the Project on the Existing Landfill

As previously stated, the existing landfill is located approximately 700 m northeast of the proposed wharf. The loading of aggregate materials may increase the overall noise disturbance and air emissions in the direct area of the proposed wharf. Runoff or groundwater from the wharf is not anticipated to reach the landfill due to the topography of the local area. Any runoff or groundwater on the site is anticipated to flow towards Forteau Bay. For these reasons, runoff and groundwater are not anticipated to flow north and as such there is very low potential for interaction between the two sites.

5.2 Potential Effects of the Existing Landfill on the Project

The existing landfill is not anticipated to have any effect on the proposed wharf. While ditching and berms are located to the southwest of the landfill there is no discharge point to allow the water to reach the wharf. For these reasons runoff and groundwater are not anticipated to flow southwest and as such there is very low potential for interaction between the two sites.

6.0 PROPOSED MITIGATION

Measures should be taken to ensure that any potential effects of the project on the existing landfill (and vice versa) are mitigated. The following mitigation measures are proposed to minimize these effects:

<u>Run Off</u>

- Proper ditching will be constructed around the proposed wharf site to direct run-off from the wharf and laydown area to vegetated areas and ensure that run-off does not enter other watercourses;

<u>Waste Generation</u>

- Any solid wastes generated at the wharf and laydown area will be contained in sealable containers, collected on a regular basis and disposed of properly at the existing landfill;

Noise

- All heavy equipment and light equipment (vehicles) will have the appropriate emission controls, as stipulated under the *Air Pollution Control Regulations* (N.L.R 39/04). All equipment will have exhaust systems that are regularly inspected and maintained, and all mufflers will be operating properly to reduce noise; and

Fuel Storage

- All storage and handling of petroleum products will adhere to the *Storage and Handling of Gasoline and Associated Products Regulations* (N.L.R. 65/03).

7.0 SIGNATURES

L. Metcalfe

Leroy Metcalfe
Partner, President & CFO
Sikumiut Environmental Management Ltd.

September 28, 2012
Date

Deidre Puddister
Environmental Manager
Pennecon Ltd.

September 28, 2012
Date

Appendix C

Forteau Quarry Permit #123887 – Crow Head

Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Natural Resources

Mineral Lands Division

File Reference: 7119597
January-17-2013

Bay Bulls Properties Inc.
P.O. Box 8274
St. John's, NL
A1B 3N4

ATTENTION: Rod Mercer

Dear Sir/Madam,

QUARRY PERMIT LETTER : PERMIT NUMBER 123887

You will please find enclosed herewith duly executed Quarry Permit Number 123887 with respect to land situated at: **Crow Head, Forteau**

Also enclosed is the receipt(s) covering your payment(s) of the rental fee for the aboved mentioned land, as follows:

Receipt Number	Amount
25873	760
Total:	760

Please note that your permit expires on: 31-Dec-2013

Yours truly,

Fred Kirby, P.Geo.
Manager, Quarry Materials

cc Department of Environment and Labour - Mines Inspection
Government Service Centre

Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Natural Resources

Mineral Lands Division

QUARRY PERMIT NUMBER: 123887

This quarry permit, issued under the provisions of The Quarry Materials Act, 1998 entitles: Bay Bulls Properties Inc. of St. John's, NL .

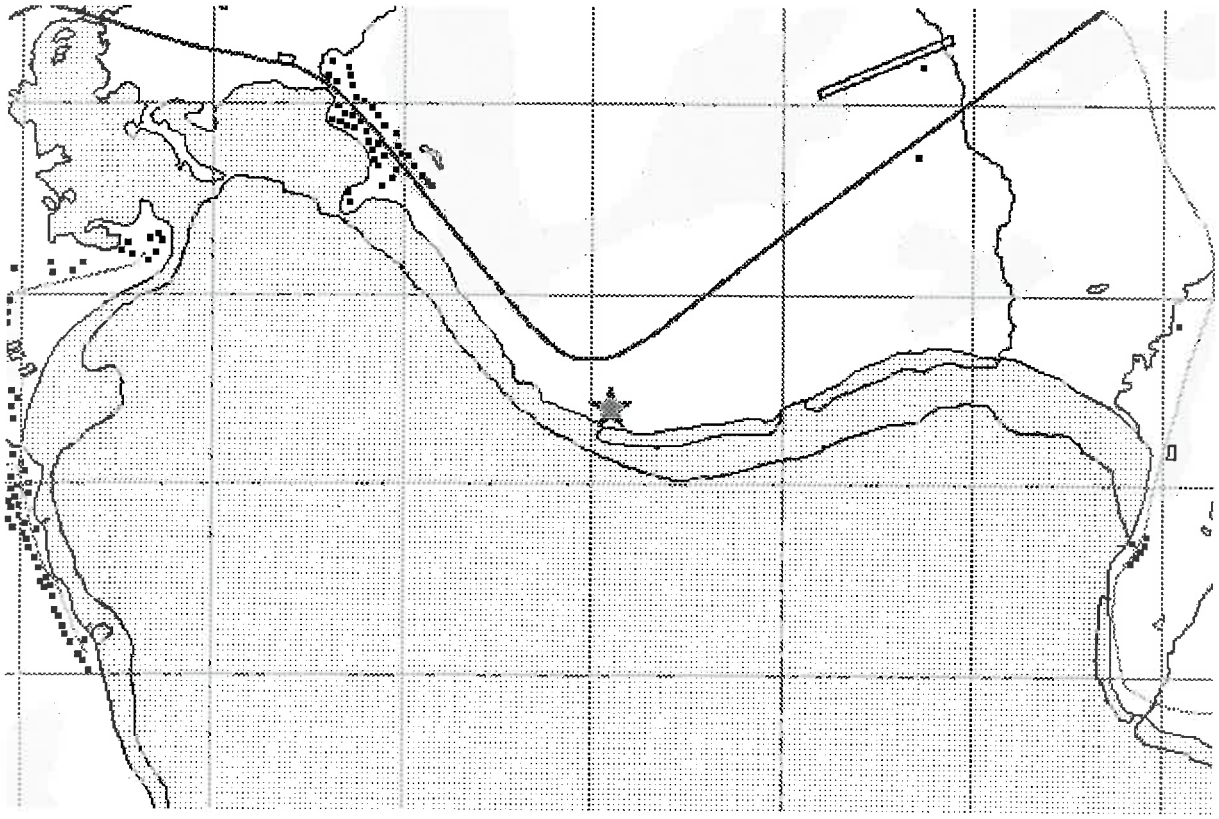
to dig for, excavate, remove, and dispose of Rock

for an area comprising approximately 9.5 hectare(s) located in the district of: Cartwright-L'Anse Au Clair

and being more particularly indicated on a map under File Number 7119597 in the Department of Natural Resources and generally described and shown as indicated on the attached map at: Crow Head, Forteau

.

Removal of topsoil is not allowed under this permit.
This permit is non-transferrable and expires on: DEC 3 1 2013



P.O. Box 8700, St. John's, NL A1B 4J6, Telephone (709) 729-4044, Fax (709) 729-6782

Subject to the following terms and conditions;

General

1. (a) This permit does not relieve the Permit-holder from adhering to any other Provincial and Federal Act or Regulation or from obtaining all other permits that may be required for the quarry operation, for example, municipal development permits, development control permits, highway access permits, cutting permits, environmental permits for asphalt plants, stream crossing, and/or any others which may be necessary.

   (b) The Permit-holder shall conduct his quarry operations in a safe and efficient manner in compliance with the Provisions of the Regulation of Mines Act and Occupational Health and Safety Act and all Regulations made thereunder.

   (c) A rental of $80.00 per hectare is payable in advance.

   (d) A royalty of $0.50 per cubic metre of material removed is payable within 2 months from the expiration of this Permit.

   (e) The Permit-holder shall leave tree screens where they exist between the workings and adjacent roads, highways or other land uses as per 1(e).

   (f) Where no tree screens exist, earthen berms shall be constructed to screen the operation from adjacent roads, highways or other land uses as per 1(e).

   (g) The Crown reserves the right to quarry and take from the area, at any time, all the quarry materials it requires free of charge without obligation to compensate the Permit-holder in any way.

   (h) A copy of this Permit shall be at the quarry site at all times that operations are proceeding.

   (i) Any person authorized by the Minister may at any time enter upon the area for Departmental purposes in order to inspect, map or examine the quarry operation.

   (j) This permit may be cancelled by the Minister without notice if the Permit-holder fails to comply with any of the terms and conditions of this Permit or The Quarry Materials Act and regulations made thereunder.

Restrictions

2. (a) There shall be no quarrying within 50 metres of any roadway, waterbody or watercourse, nor within 300 metres of any residential development without the permission of the Minister in writing. In Protected Road Zone Areas, there shall be no quarrying within 90 metres of the centre line of the road without the written permission of the Development Control Division, Department of Municipal and Provincial Affairs.

   (b) There shall be no quarrying within 15 metres of private property unless the prior written consent of the owner of the private property is first obtained and a copy of this consent document is forwarded to the Department of Natural Resources.

   (c) The Permit-holder is responsible for ensuring that no topsoil is removed from the area, unless the permit states topsoil removal is allowed, and that there is no unauthorized access to the area.

(d) The Permit-holder, in the conduct of the quarry operations shall not pollute or permit the pollution of any pond, brook, river or other waters.

(e) Except with the consent of the Minister of Environment and Conservation, the Permit-holder shall not in any way interfere with any pond, brook, river or other waters.

(f) The Permit-holder shall, in the conduct of the quarry operations, comply with all laws of the Parliament of Canada and Regulations and Orders made thereunder relating to the prohibition of pollution of waters.

(g) All access roads to each operation shall be bridged or culverted where they cross brooks or streams in accordance with the Regulations of the Department of Environment and Conservation.

(h) Except with the written permission from the Minister, quarrying is not permitted to result in the excavation of areas below the level of the water table nor in any way to cause the accumulation or ponding of water in any part of the quarry site. Settling ponds, in particular, require both the written permission of the Minister and approval of the Department of Environment and Conservation.

(i) No building or structure shall be erected upon the permit area without the prior written approval of the Minister.

(j) All buildings, structures and equipment erected shall be kept in good repair and working order.

(k) The area shall be kept free of refuse, abandoned vehicles and equipment and any derelict buildings.

Site Preparation

3. (a) The Permit-holder shall, prior to commencing operations, erect suitable corner posts or rock cairns at least 1 metre high and carry out suitable blazing of trees or erection of flag or fence material to outline the area under permit.

(b) All boundary markings shall be maintained during the term of the permit.

(c) The area to be excavated shall be clear cut of all vegetation prior to the removal of any quarry material. Also, the nearest Forestry Management office must be contacted to obtain any necessary cutting permits and to receive instructions regarding the salvage of wood. Only that area necessary for one year's production may be cleared under this permit.

Quarry Operations

4. The Permit-holder shall conduct his quarry operations in an efficient manner as set out below:

(a) All stumps, organic material and topsoil (including the rusty colored and iron stained layer) shall be stripped and stockpiled at least 5 metres from uncleared areas and 10 metres from active quarry or stockpile areas. The Permit-holder shall ensure that the quality of the topsoil is not affected by dilution with other materials.

(b) The quarrying of the desired materials shall be conducted in a systematic manner taking into account the life expectancy of the operation, the eventual slopes and grades upon completion, the potential "after quarry" use of the site and the various grades of materials available at the site. Benching may be necessary to allow for the extraction of specific types or grades of naturally sorted aggregates or to prevent the contamination of higher grade materials by lower grade materials. High grade, high quality materials shall not be used when lower grade materials would be adequate, i.e. concrete grade gravel shall not be used as fill or road subgrade, etc.

(c) The quarry faces during operation shall not exceed 5 metres in height except with the written permission of the Minister.

Termination of Operation

5. (a) Not less than thirty days prior to abandonment of a site, the Permit-holder shall notify the Department of Natural Resources to arrange for an inspection of the site.

(b) Upon surrender, cancellation or expiration of the permit, the Permit-holder shall, within thirty days after the surrender, cancellation or expiration, take from the permit area any buildings, machinery, chattels, personal property and quarry material which has been extracted and in default of doing so, the Minister may sell or otherwise dispose of the said buildings, machinery, chattels, personal property and quarry material upon such terms and conditions as he considers expedient. In the event that the cost of disposing of the said buildings, machinery, chattels, personal property and quarry materials exceeds the amount recovered by the Minister the Permit-holder shall notwithstanding the surrender, cancellation or expiration of the permit pay to the Minister any deficiency.

(c) Upon completion of the operation or during extended periods of shutdown, the access road to the quarry shall be ditched or barred to the satisfaction of the District Manager, Department of Transportation and Works.

(d) Upon completion of quarrying, all pit and quarry slopes shall be graded to slopes less than 20° or to the slope conforming to that existing prior to quarrying; waste overburden may be used for sloping but the topsoil or organic materials shall not be used for sloping. Following sloping, the topsoil and any organic materials shall be respread over the entire quarried areas. Seeding is required so as to produce a vigorous plant growth.

(e) Rehabilitation of the quarry site as outlined in 5(d) above may with the written permission of the Minister, not be implemented in the case of an operation or quarry that is deemed by Mines staff to still contain sufficient reserves of materials that may be mined in the near future. In this case, rehabilitation may be required only for those areas or parts of the pit or quarry mined out. Sloping and seeding of remaining topsoil stockpiles may be required.

(f) A complete report, on the form provided, stating the quantity and type of material removed under this permit shall be filed with the royalty payment referred to in Condition 1(d) of this Permit.

"Special Terms" additional to the above terms and conditions:

1. Two months prior to the start of quarry development, a development plan, post-development plan and a financial assurance plan must be submitted and approved by the Minister of Natural Resources. Financial assurance in the amount identified in the approved financial assurance table must be submitted in a form acceptable to the Minister prior to the beginning of development activities at the site.

2. All on-site fuel storage must be approved by Service NL, Labrador.

3. Spills in excess of 70L and all leaks must be reported immediately to the 24 hour spill report no (709) 772-2083.

4. All spills and leaks must be cleaned up immediately regardless of size and the area inspected and given clearance by Service NL by calling (709) 896-5473.

5. All waste material produced on-site, including lunch waste, must be removed to an approved waste disposal site on a weekly basis.

6. Access to the site should be via an existing access road. All new access roads must be approved by the Department of Transportation and Works prior to construction.

7. Appropriate Highway Access Permit required if accessing highway.

8. A permit under the Protected Road Zoning Regulations maybe required. Contact Service NL, Happy Valley-Goose Bay Office.

Minister of Natural Resources

Date: 2013.01.17

Location: 51° 28' 34." N
56° 54' 34" W

Appendix D

Pioneer Footpath Trail

LABRADOR PIONEER Footpath

Phase I: L'Anse-au-Clair to Pinware

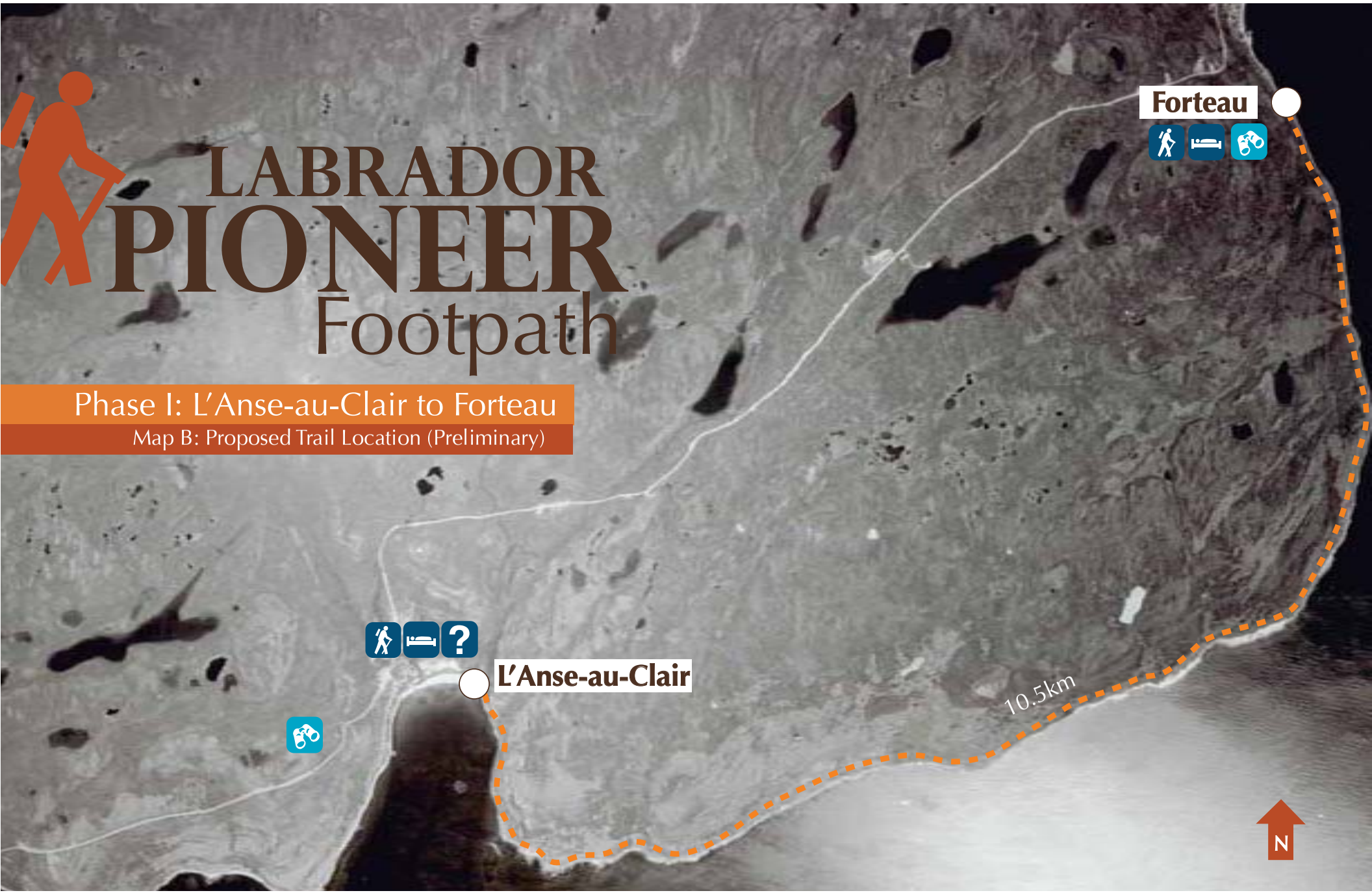
Phase II: Pinware to Red Bay

Community	Distance (km)	Time*	Destination
L'Anse-au-Clair	12 km	3 hrs	Forteau
Forteau	9 km	2.25 hrs	L'Anse-Amour
L'Anse-Amour	9 km	2.25 hrs	L'Anse-au-Loup
L'Anse-au-Loup	13.5 km	3.5 hrs	West St. Modeste
West St. Modeste	6 km	1.5 hr	Pinware
Pinware	25 km	6.25 hrs	Red Bay

0km 5km 10km 15km

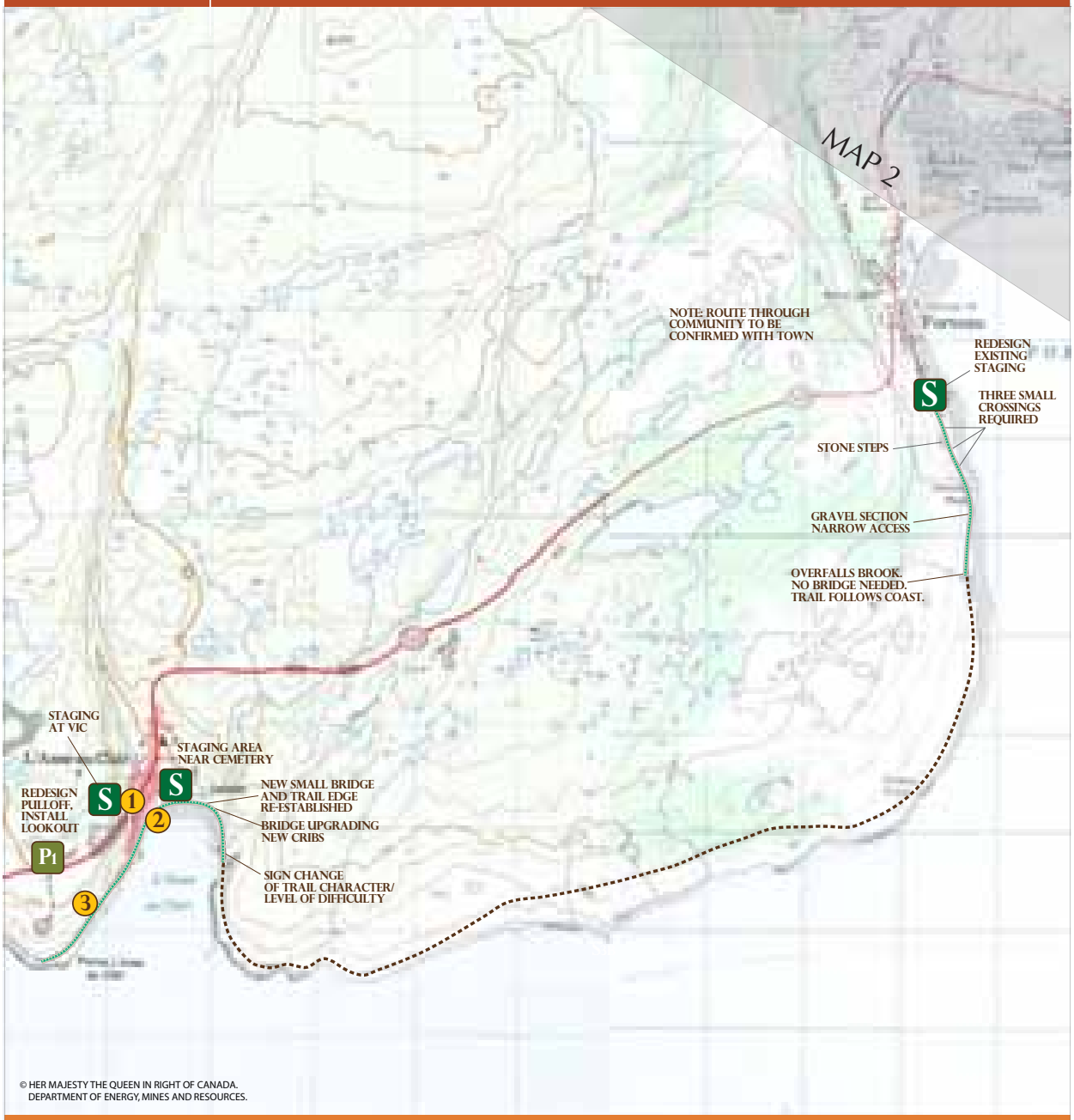
*Approxiate time based on a moderate walking pace.

Map A: Proposed Trail Location (Preliminary)


LABRADOR
PIONEER
Footpath
Phase I: L'Anse-au-Clair to Forteau
Map B: Proposed Trail Location (Preliminary)
Forteau
L'Anse-au-Clair
10.5km
N

MAP 1

LABRADOR PIONEER Footpath



LEGEND

Features		Proposed			
1	VIC	P1	Pulloff (War Memorial)		Wilderness Trail
2	Jersey Trail Sign	S	Staging		Granular Trail
3	Jersey Trail				

TRACT CONSULTING INC.
Box 504
St. John's, NL
Canada A1C 5K4
|T| 709.738.2500
|F| 709.738.2499

prepared for	project	component	date
Labrador Straits Historical Development Corporation	Labrador Pioneer Footpath	Trail Maps	August 2007

MAP 4

LABRADOR PIONEER Footpath

LEGEND

Proposed

P5 Pulloff (West St. Modeste)

Wilderness Trail

S Staging

TRACT CONSULTING INC.
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prepared for	project	component	date
Labrador Straits Historical Development Corporation	Labrador Pioneer Footpath	Trail Maps	August 2007

MAP 3

LABRADOR PIONEER Footpath

LEGEND

Proposed

- P4 Pulloff (L'Anse au Diable)
- S Staging
- Wilderness Trail
- Granular Trail

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prepared for	project	component	date
Labrador Straits Historical Development Corporation	Labrador Pioneer Footpath	Trail Maps	August 2007

MAP 2

LABRADOR PIONEER Footpath

LEGEND

Features		Proposed			
1	Museum	P2	Pulloff (Crow Head)		Wilderness Trail
2	Historic Site	P3	Pulloff (Schooner Cove)		Granular Trail
3	Lighthouse	S	Staging		

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prepared for	project	component	date
Labrador Straits Historical Development Corporation	Labrador Pioneer Footpath	Trail Maps	August 2007

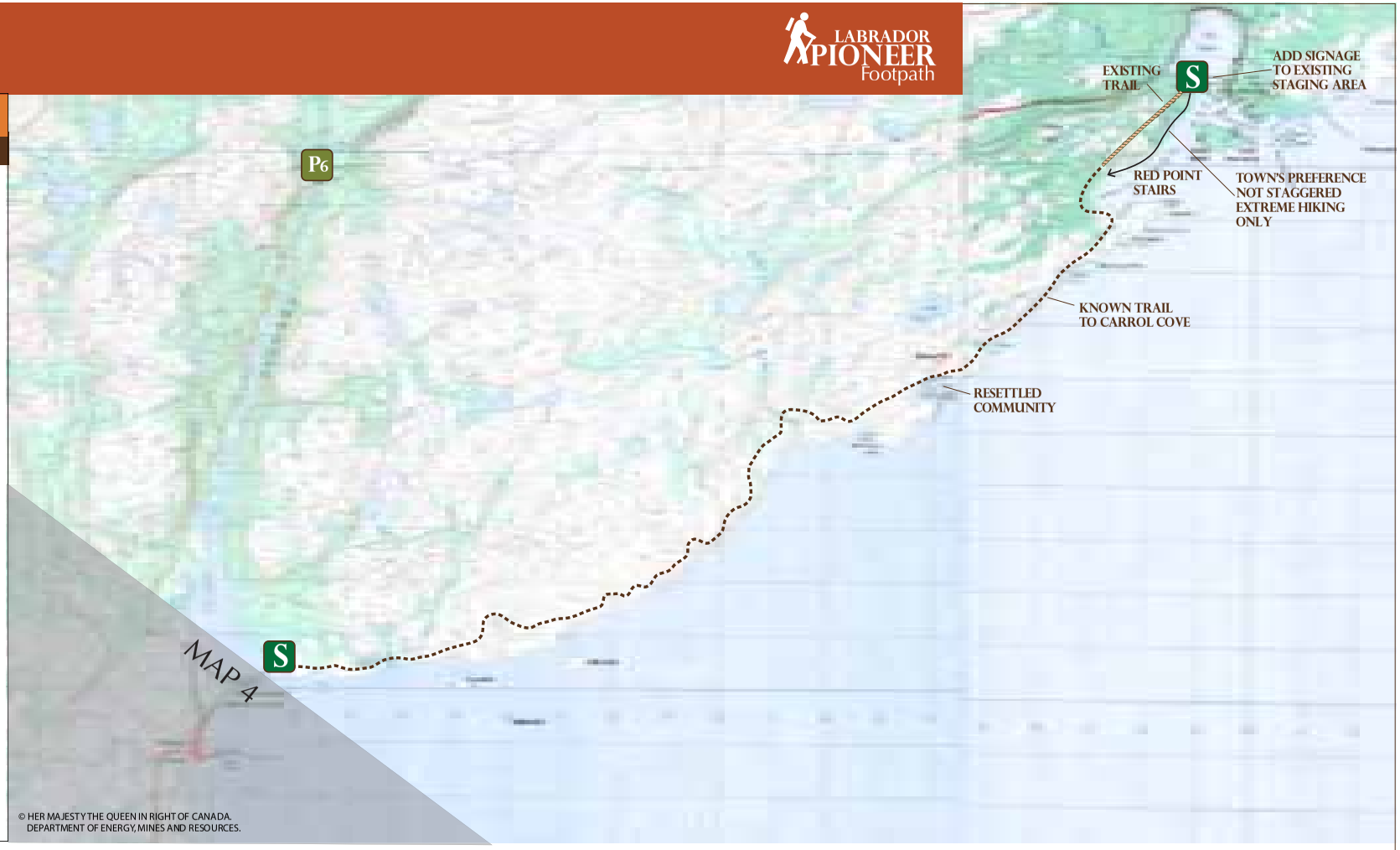
MAP 5

LABRADOR PIONEER Footpath

LEGEND

Proposed

- P6 Pulloff (Pinware River)
- S Staging
- Wilderness Trail
- Developed Trail



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prepared for	project	component	date
Labrador Straits Historical Development Corporation	Labrador Pioneer Footpath	Trail Maps	August 2007

Appendix E

Historical Resources Overview Assessment

Robert Cuff
172 Cumberland Crescent
St. John's, NL
A1B 3M5

MEMO

To: K.C. Dhiraj
Pennecon

17 April 2013

Forteau Dock – Quarry site

On 19 and 20 September 2012, Blair Temple and Toby Simpson, Gerald Penney Associates Limited (GPA), conducted a Historic Resources Overview Assessment (HROA) of a proposed marine base at Crow Head, a steep cliff/hillside and shoreline east of Forteau, Labrador. Four particular areas/elements were investigated: an access road, leading down from an existing road off Route 510; a laydown area along the shoreline; a wharf; and a quarry site. The quarry site is located south of Route 510, east of its junction with the existing portion of the access road. The area is primarily small forest cover, over rocky ground. Given the elevation of the specific area – c. 80-85 m asl – the quarry site held little historic potential. The area was investigated; subsurface testpitting (n=5) identified no historic resources.

Gerald Penney

Gerald Penney
ASSOCIATES LIMITED

25 September 2012

KC Dhiraj
Bay Bulls Properties Limited
650 Water Street
St. John's, NL
A1C 5M5

RE: Bay Bulls Properties Limited, proposed marine property, Forteau, Labrador.

On 19 and 20 September 2012, Blair Temple and Toby Simpson of Gerald Penney Associates Limited (GPA), conducted a Historic Resources Overview Assessment (HROA) at Crow Head, on the north side of Forteau. The developer proposes to construct a wharf and laydown area along the shoreline, as well as an access road leading down through a steep hill from Route 510, and a quarry at the top of the hill. The wharf is slated to be c. 1 ha in size while the laydown area will be c. 6 ha. The entire wharf, laydown area, quarry and access road area was examined and the following is a summary of findings.

The southeast end of the project area contains an existing archaeological site, EiBf-3, first recorded in 1875 by T.G.B. Lloyd. The site consists of seven stone features – each essentially a stone ring – all are presumably structures of either European or Inuit cultural affiliation. The features range in size from 1.6 m × 3.5 m to 4.5 m × 5.7 m, varying from oval to circular in shape. One of these appears to have been modified in recent years to construct a bird-blind. Otherwise, all are in a relative stable condition.

In addition to the seven previously recorded features, two other features were identified during field investigation. One is a possible eighth structural feature (505406E 5703238N, NAD 83), located on the shoreline near the northwest end of the proposed laydown area, at a similar elevation as the other seven stone structures. It is generally similar in size and dimension to the others, 2.7 m × 2.9 m; it may be a bird-blind,

104-40 Quidi Vidi Road · St. John's · NL · A1A 1C1
T 709.739.7227 · **E** gpaltd@nl.rogers.com · **W** geraldpenneyassociates.com

although if it is, it is probably of an early date as the stonework has the appearance of having been laid long ago, and shows no sign of recent changes or modifications.

Along the approximate route of the access road from Route 510 to the wharf, at an elevation of c. 35 m asl, a stone foxtrap was identified along the edge of a stone terrace, (505687E 5703115N, NAD 83). It is an approximately 2.9 m × 1.8 m mound of stone with a 0.3 m wide × 0.4 m high rectangular tunnel through its length. Other than toppled stones at one end, the feature is in relatively good condition. Its cultural affiliation is not known, but it is similar to other features identified in southern Labrador as Inuit in origin.

Investigation of the proposed quarry location and test pitting in the vicinity of the proposed wharf area and the route of the access road exposed no historic resources.

All seven previously identified stone structural features as well as the newly identified eighth structural feature are within the proposed laydown area, at the southwest and northeast ends respectively. Likewise, the stone fox trap is located directly within the proposed route of the access road. Consideration will have to be made for their conservation.

Yours sincerely,

Gerald Penney
President

Google Earth image showing location of features identified (yellow points).

One of the stone rings at the southwest end of the laydown area.

Stone foxtrap, looking SSE.

Forteau Marine Base
Historic Resources Overview Assessment
Archaeological Investigation Permit #12.39

Stone fox trap (EiBf-55), at centre, on edge of rocky terrace.
Forteau and English Point in background.

Submitted to
Provincial Archaeology Office
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15 October 2012

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Letter of Transmittal

15 October 2012

Martha Drake
Provincial Archaeologist
Department of Tourism, Culture and Recreation
Confederation Building
St. John's, NL
A1B 4J6

Dear Martha,

Please find enclosed our report "Forteau Marine Base Historic Resources Overview Assessment" under Archaeological Investigation Permit #12.39.

Sincerely,

Gerald Penney
President

/encls
Cc. KC Dhiraj, Bay Bulls Properties Limited

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Executive Summary

Under Archaeological Investigation Permit #12.39, Gerald Penney Associates Limited (hereinafter GPA) conducted a Historic Resources Overview Assessment (hereinafter HROA) at the site of a proposed marine base north of the Town of Forteau, along the shore and steep cliff known as Crow Head. An existing site – EiBf-3 (Crow Head 1, Forteau Bay 2) – was investigated to determine its proximity to the proposed development. Two additional sites (EiBf-54 [Crow Head-2] and EiBf-55 [Crow Head-3]) were identified during the field investigation. Although both sites contain stone features, no artifacts were recovered during the HROA.

All three sites and the Labrador Pioneer Footpath hiking trail will be negatively impacted by the construction activities as planned, therefore some form of mitigation and/or alterations to construction plans must occur.

Participants

Gerald Penney, M.A.	principal investigator
Blair Temple, M.A.	field archaeologist; report preparation
Toby Simpson, B.A.	field archaeologist; drafting/digital mapping
Robert Cuff, M.A.	historical research; report preparation
Lori Temple, B.A.	cataloguing
Miki Lee, B.A., Dip. CCM	conservator

The assistance of the Provincial Archaeology Office, Bradley and Carmen Hancock (Forteau), and KC Dhiraj (Bay Bulls Properties Limited) is greatly appreciated.

Introduction

In September 2012, GPA was contacted by Bay Bulls Properties Limited requesting that a HROA be conducted at a proposed marine base at Crow Head, east of English Point, between Forteau and L'Anse Amour. The proponent proposes to construct a c. 1 ha wharf, as well a c. 1.1 km long laydown area along the lower shoreline (Appendix A). The purpose of this marine base will be to transport quarried stone out into the Strait of Belle Isle to be used to cover submarine transmission lines from Muskrat Falls. A quarry will be located at the top of the hill on the south side of Route 501. Access will be via a road leading from Route 510 downward through the hill.

On 19 and 20 September 2012, Toby Simpson and Blair Temple, of GPA, conducted the required HROA, including an initial walkover survey of the entire wharf and laydown area. This included locating and recording the stone features (EiBf-3) at the southeast end of the project area. The route of the access road was investigated as was the proposed quarry. Test pitting took place above the shoreline where wharf construction is slated and along the lower elevations of the access road.

Northwest end of study area (bare cliff and shoreline at right) from English Point, the study area continues around the point towards L'Anse Amour.

Study Area/Natural Features

The study area is a rocky length of steep sandstone shoreline located between English Point (east end of Forteau) and L'Anse Amour. It is marked by a gradually steepening cliff, from northwest to southeast, the highest and steepest portion east of the project area. The shoreline has a beach of varying widths, the entire length of which is rocky within the project area. Where the cliff is step and close to the shoreline, the rock is angular and large. Northwestward towards English Point, the distance between the slope (bottom of the hill) and the shore increases, and the beach becomes more cobble-like than angular. Ground cover varies from tree covered, to moss and lichen. Where turf exists, it tends to be particularly deep (often in excess of 60-70 cm) otherwise it consists of 10-20 cm on rock. The tree cover exists at the base of the slope, inward from the beach; most tree coverer is located northwest of the wharf area. As the slope increases, tree cover is limited and consists largely of alder. The upper elevations are comprised predominantly of large rock, making travel tricky in places, with the upper portions marked with large outcrops and rock towers. The very upper portion of the study area, where the quarry will be, is tree covered to the north, with a mix of alder, small fir and tuckamore. The town dump is located less than one km NE of the study area (on the opposite side of Route 510), resulting in garbage strewn along hills and trees.

The cliffs are a common nesting areas for birds, hence the name "Crow Head". Based on the empty 12-gauge shell casings found along the shoreline below, the area is also frequented by seabirds. (During field investigation, we spoke to a gentleman who was on his way just east of the study area to hunt for seabirds). Small animals seem to be plentiful as well, as evidenced by numerous paths, and signs of dens and hollows. The rocky nature of the surface at the higher elevations, coupled with the limited human activity, makes the areas a good location for animals such as fox or rabbit.

Previous Archaeology

The Labrador side of the Strait of Belle Isle – commonly referred to as the Labrador Straits – have been the focus of antiquarian and archaeological interest since at least the late 19th century. The first study focusing on the cultural history of the Strait of Belle Isle

Modern bird blind, east of study area.

was Elmer Harp, Jr. (1951) in the 1940s and 50s. In the early 1970s, James A. Tuck and Robert McGhee of Memorial University of Newfoundland tested and excavated several sites, including several previously examined by Harp. Their subsequent publication remains one of the key sources on the cultural history of the coast (McGhee and Tuck 1975).

Specific to the Forteau Bay area, archaeological material has been recorded since the late 19th century, when T.G.B. Lloyd made some surface collections at Forteau Bay, and first recorded stone structures at Crow Head (1875:40-41). Harp examined three sites in Forteau Bay during his initial visit: at Buckles Point (~700 m point of land extending eastwards and north towards the bottom of the bay at Forteau River), the site at Crow Head, and at L'Anse Amour (1951:205). McGhee and Tuck excavated a large cache of bifaces at Buckles Point (1975:59-62). Other sites were identified in nearby English Point

and L'Anse Amore, including the Maritime Archaic burial at the latter (Ibid:56-58, 63-66, 76-94). Since McGhee and Tuck's research, no systematic work has occurred in the Forteau Bay area, though a great number of sites have been found by residents (Balson 2001) or by archaeologists conducting HROA's, particular in the town of Forteau (Temple 2003; GPA 2011).

Historic Context

The oldest human occupation in the Province has been recorded along the south coast of Labrador. Maritime Archaic Indians (hereinafter MAI), who first reached this coast around 8000 BP (McGhee and Tuck 1975), gradually expanded northward over the course of the next several thousand years, into Groswater Bay by 7500 BP and reaching as far north as Nulliak by c. 3700 BP (Fitzhugh 2006).

In southern Labrador the MAI continued to occupy the coast until approximately 2000-3000 BP, when they were both gradually replaced by paleo-eskimo groups and impacted by climate change. The occupation of the Labrador Straits by these paleo-eskimo groups is at present poorly understood, with little in the way of archaeological data from secure components (Fitzhugh 1980). Most of the Dorset and Groswater cultural material recovered derive from small spotfinds. McGhee and Tuck have postulated that the occupation of the coast by these peoples may have been sparse (Ibid:121-123).

Continuous European presence along the Labrador Straits begins with the appearance of Basque whalers in the 1530s (Tuck and Grenier 1989). Throughout the later 17th and 18th century, French merchants stationed in Quebec held grants for fishing and sealing within several harbours along the Lower North Shore and southern Labrador, Forteau included. Beginning in the late 18th century, English and Jersey merchants began to occupy the coast, setting up fishing establishments in many harbours. In fact, Forteau would serve as a border station of sorts between the English and Jersey fishers: the Jersey fishers located on the west side of Forteau Bay, and westward into Quebec; the English located from the east side of Forteau (hence English Point), eastward up the coast of Labrador. These earliest Jersey merchants in Forteau included the firms of DeQuetteville and

LeBouthillier, while the first English merchant in Forteau (at English Point) was Joseph Bird, c. 1808. These enterprises would prove significant as workers overwintering at the various stations to tend to the premises and gear would become the root of permanent settlement along the coast (Temple 2007; Thorton 1977).

The relationship between the relative sea-level history and the location of archaeological sites has become an increasingly common part of archaeological assessment (cf. Renouf and Bell 2006). Regarding the Labrador Straits, this relationship has been understood for decades (McGhee and Tuck 1975:110-112), with the basic understanding being that the older the site, generally, the higher the elevation. While it has been noted that the relative dating of sites using elevation may be problematic along Labrador Straits (Clark and Fitzhugh 1992:203), it has been useful in dealing with small collections.

Field Results

The existing site (EiBf-3) was investigated and seven features located and recorded (Appendix D). Two additional stone features were identified and recorded during the HROA: a possible stone structure or bird blind (EiBf-54) and a stone fox trap (EiBf-55). In addition to the walkover and surface survey of the entire project area, test pitting occurred on the bottom two terraces in the vicinity of the proposed wharf and the lower elevations of the access road where it will reach the wharf area. Fifty-six test pits were excavated (Appendices B and D): 41 along the lowest terrace above the rocky beach, and 15 on the next terrace, at an elevation of 7.0-9.0 m asl. No historic resources were identified during test pitting. The finding of the walkover survey is discussed below.

Stone features recorded at EiBf-3, 19-20 September 2012

Features – EiBf-3	Coordinates (NAD 1983, 21U)		Approximate dimensions	
	Easting	Northing	External	Internal
Feature 1	0506149	5702563	3.5 m × 1.6 m	1.5 m × 1.3 m
Feature 2	0506161	5702568	5.7 m × 4.1 m	3.3 m × 2.8 m
Feature 3	0506176	5702569	4.0 m × 3.5 m	2.0 m × 1.3 m
Feature 4	0506178	5702566	4.2 m × 4.2 m	2.6 m × 1.6 m
Feature 5	0506174	5702566	4.0 m × 3.5 m	2.6 m × 2.2 m
Feature 6	0506119	5702568	4.7 m × 3.2 m	3.2 m × 2.3 m
Feature 7	0506106	5702570	4.5 m × 3.5 m	3.5 m × 2.6 m

Panoramic photo of test-pitted portion study area, location of wharf and lower access road.

EiBf-3 (Crow Head-1; Forteau Bay-2). This site was first recorded by T.G.B. Lloyd in 1873 (1875), and subsequently revisited by Harp in 1949 and 1961 (1951; 1963); McGhee in 1985 (1989); and Auger and Stopp in 1986 (1986:241; 1987). Lloyd identified seven features, which he described as "the ruins of seven small stone buildings…built up of slabs of sandstone of various sizes, laid roughly upon each other, and filled with turf sods" (1875:40). He also notes that at least one of the structures was square (Ibid.). Harp provided little information on the site during his initial visit in 1949, but visited the site for the second time in 1961, and conducted partial excavations of the interior of five of the features. (These excavations were likely within the five circular/oval examples; GPA's Feature 1-5). Harp's only find was a clay pipe fragment; he reiterates that the affiliation of the site remains unanswered (1963:193). When McGhee visited the site he mentions seven "circular" structures, making no reference to one, possible two, square or rectangular features at the site (1989:239). He does note that the features remain as described by Harp, a comment confirmed by Auger and Stopp (1986:241).

During our investigation, seven features[1] were identified, in various states of preservation (Appendices B and D). Two appear to have been square or rectangular in shape (Feature 6 and 7), and are located a small distance northwest from the other features. At both, only

[1] For this report, they will be referred to as "features".

two walls remain in any condition suitable for recording, with some additional stone protruding from the ground suggesting the location of the other walls. The internal dimensions of each are at least 2.3 m × 3.2 m and 2.6 m × 3.5 m respectively. The height of the stonework is no more than 20-30 cm above the surface, protruding through the lichen which surrounds each feature. The surface elevation is the same both internally and externally. The remaining features (Features 1-5) are either circular or oval (or vaguely oval shaped). Feature 1 is the most questionable of the features, having obvious modifications and reconstructions for use as a modern bird-blind. It is also the smallest (internally) of the remaining features, at 1.5 m × 1.3 m. Features 2 and 5 are generally circular, both with visible entrance ways in the front facing southwest or west, opening up to the rocky beach. Feature 2 is interesting in that it has a c. 40 cm wide square tunnel through its eastern wall, almost directly on the ground[2]. The purpose of this is not known. It may represent the modification of an abandoned structure into a fox trap. Features 3 and 4 are oval, or half-moon shaped, and not quite as large internally as the two circular features. The entrance of Feature 4 could not be identified clearly. Each of these circular or oval features has a flat depression inside the stonework, presumably a (sunken) floor, resulting in the internal depth being c. 20-40 cm deeper than the exterior. (It may have been altered by Harp's excavations). Of some concern is that some of the features exhibit signs of recent digging. No cultural material was observed during surface inspection, and no test pits were excavated within or surrounding the features. Based on Lloyd's descriptions of the seven features at EiBf-3, it would seem that the condition of some have fortunately changed little since the 1870s. (The sod is no longer present). At least one has been altered significantly (Feature 1), with changes likely at others.

[2] Harp (1963:193) is the only past observer to record this anomaly. He offers no possible function.

Feature 7, EiBf-3 – one of the "square" features at the site.

Feature 4, EiBj-3 – example of the circular/oval features. This is one of the better preserved.

Feature 2, EiBj-3 – Note the opening at right, interior of feature.

Exterior of Feature 2, with opening partially visible at centre.

EiBf-54 (Crow Head-2). During the surface walkover at the northwest end of the laydown area, another stone feature (similar to those at EiBf-3) was identified. It roughly oval shaped, measuring c. 2.7 m × 2.9 m externally, with an internal dimension of c. 1.6 m × 0.8 m. Very little of the stonework exists, and most of the stone that does has toppled outward. It is possible, due to its size, that it was a bird blind or bird gaze, and not a structure. However, if this feature is in fact a bird blind, then the appearance of the stone work suggests it having been laid or constructed some time ago, with no indication of any recent repair or modification, and is therefore an old example.

Possible historic bird gaze feature, EiBj-54.

EiBf-55 (Crow Head-3). While investigating the proposed route of the access road from the highway (specifically, from an existing gravel road leading from the highway) to the wharf and laydown area, a small stone feature was observed on the edge of a rocky terrace, approximately 35 m asl. Upon examination was determined to be a stone fox trap

(wpt "CH8TRAP" – 505687E/5703115N, NAD 83). Its external dimension is c. 2.9 m × 1.8 m, runs in an approximate NW/SE direction, and is c. 0.6 m high. Running through the length of the feature at just below surface level is a rectangular tunnel, 0.3 m wide by 0.4 m high. The tunnel is blocked (deliberately?) at the northwest end. Some of the stone at the one end had collapsed, but otherwise, the feature was in great condition. Some garbage from the nearby municipal dump was observed inside, as was the partial skeleton of a medium-sized bird. Similar type features have been identified in southern Labrador, particularly on Inuit sites in the Bad Bay area (Auger and Stopp 1986:178-198; 1987:41-42), and further north at Cape North, Spotted Island, and Huntington Island (Stopp and Reynolds 1992:13) for example.

Opposite views of stone fox trap feature, EiBj-55.

Auger and Stopp describe a fox trap as follows:

> The fox enters the tunnel, enticed by a piece of meat which, when pulled triggers the release of a stone over the entrance. It is an ingenious ensemble of boulders heavy enough to prevent escape. The tunnel is narrow enough to prevent the trapped fox from struggling, or turning around, which would ruin the fur (1987:42).

The dimensions and description provided generally match the feature identified at EiBf-55. Auger and Stopp further note that fox traps are often found in association with settlements, often near sod houses. This adds some credence to the suggestion that the features at EiBf-3 are Inuit, though it has been correctly stated that the association of fox traps with the Inuit must be accepted cautiously in the absence of any cultural material (Stopp and Reynolds 1992:13).

Discussion/Recommendations

Test pitting along proposed route of the access road and the wharf, exposed no historic resources. However a walkover survey of project area resulted in the recording of two previously unidentified features, in addition to recording the features at EiBf-3. The cultural affiliation of the three sites is uncertain. The fox trap (EjBf-55) is likely Inuit, and it is possible that the stone features at EjBf-3 are Inuit as well[3]. The culture of the feature at EiBf-54 is less certain; if it is a bird gaze, it is presumably of European origin.

The nature, date and intensity of the Inuit presence in southern Labrador has been the topic of much debate (cf. Stopp 2002), and any archaeological evidence that adds even the slightest data to this issue is of significance. McGhee (1989:239) notes that "it is possible that further excavations might reveal evidence relating to the proposed attribution of the site to an historic Inuit occupation of the area." As the cultural affiliation is uncertain, so to is the date. Lloyd's reference to the features at EiBf-3 means they predate 1875. In addition, an elderly man to whom Lloyd spoke made reference to visiting then a decade earlier, pushing the date back to the early 1860s. They presumably pre-date the living memory of all local inhabitants. If they are in fact Inuit, then they likely date to 17th or 18th century, coinciding with the documented presence along this part of the coast (Stopp 2002), before the permanent settlement of the area by Europeans in the early 19th century (Thorton 1977). One final aspect of the site pertains to the presence of the two seemingly square (?) structures – which are spatially distinct from the other five – and the chance that their cultural affiliation may be different from the circular

[3] Lloyd (1875: 40-41) noted that an elderly man accompanying him referred to the features as "graves", and he refers to them as "so-called Indian Graves".

and oval ones (e.g. the square structures may be European). Excavation may shed light on this issue. The fox trap (EiBf-55) is also of uncertain affiliation, but based on their association with other Inuit dwellings elsewhere in southern and southeastern Labrador, probably Inuit as well. The stone feature at EiBf-54 has an unknown function (structure? bird gaze?), and therefore an uncertain date and affiliation.

The precise location of the structures at EiBf-3 was recorded in order to determine their relation to the impending construction activities. The locations of the other identified features (EiBf-55 and 56) are also within the project area – the wharf and access road, respectively – and will certainly be impacted if the project goes ahead as planned. Considerations will have to be made for their protection.

During a post-fieldwork meeting with Mr. Dhiraj, he informed us that the stone features located on the beach (EiBf-3 and 54) could be easily avoided by simply shortening the length of the laydown area at each respective end. This form of avoidance mitigation would work quite well in this instance. Some sort of marker or flagging would be used to mark the features. The stone foxtrap (EiBf-55) is directly within the route of the access road however, and even if the access road is rerouted northward, closer to Route 510, the chances of avoiding the feature during construction in such a cumbersome location would prove difficult. The mitigation proposed by GPA – in lieu of changes to the construction plan – is to excavate the small feature, dismantle and remove it, conducting extensive photography and mapping throughout the dismantling process. Mr. Dhiraj suggested that the stones could be salvaged and the feature reconstructed elsewhere for tourism purposes.

One final issue of concern involves the Labrador Pioneer Footpath, a hiking trail which runs along the shoreline from L'Anse au Clair to Red Bay. A portion of this trail runs adjacent to, or through, the study area and will certainly be impacted (Appendix D). Not only will the wharf and access road impact on the trail, but the marine base could result in limited, to no, foot traffic along this part of the shoreline, effectively closing this portion of the trail. Alternatives for this impending issue will have to be resolved between Bay

Bulls Properties, the PAO, and the Labrador Straits Historical Development Corporation (caretakers for the trail).

All mitigation strategies will be discussed and determined through consultation between GPA, Bay Bulls Properties Ltd, and the PAO.

Portion of Labrador Pioneer Footpath running through proposed wharf area.

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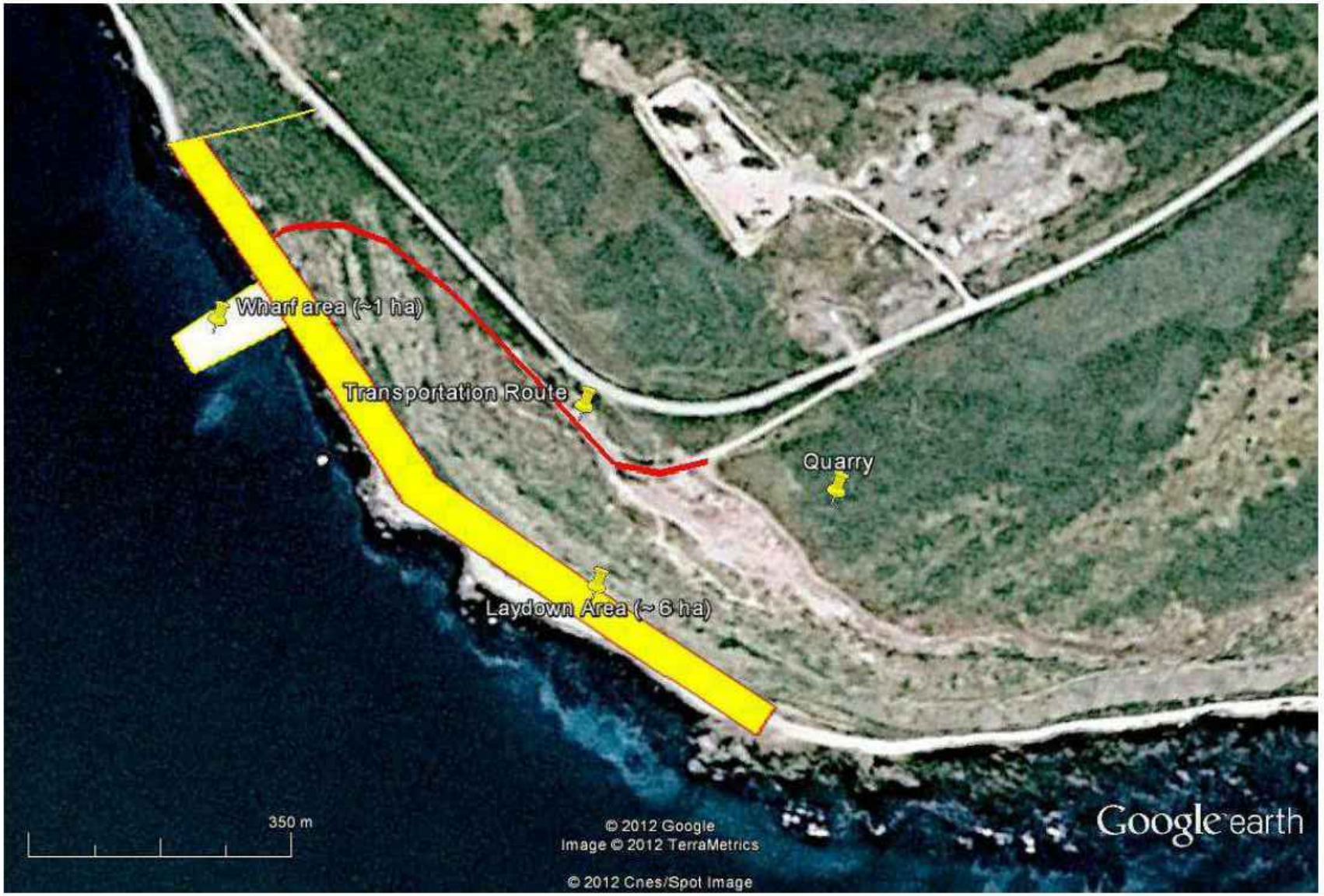


Google earth feet 3000 km 1

Map of proposed construction project.

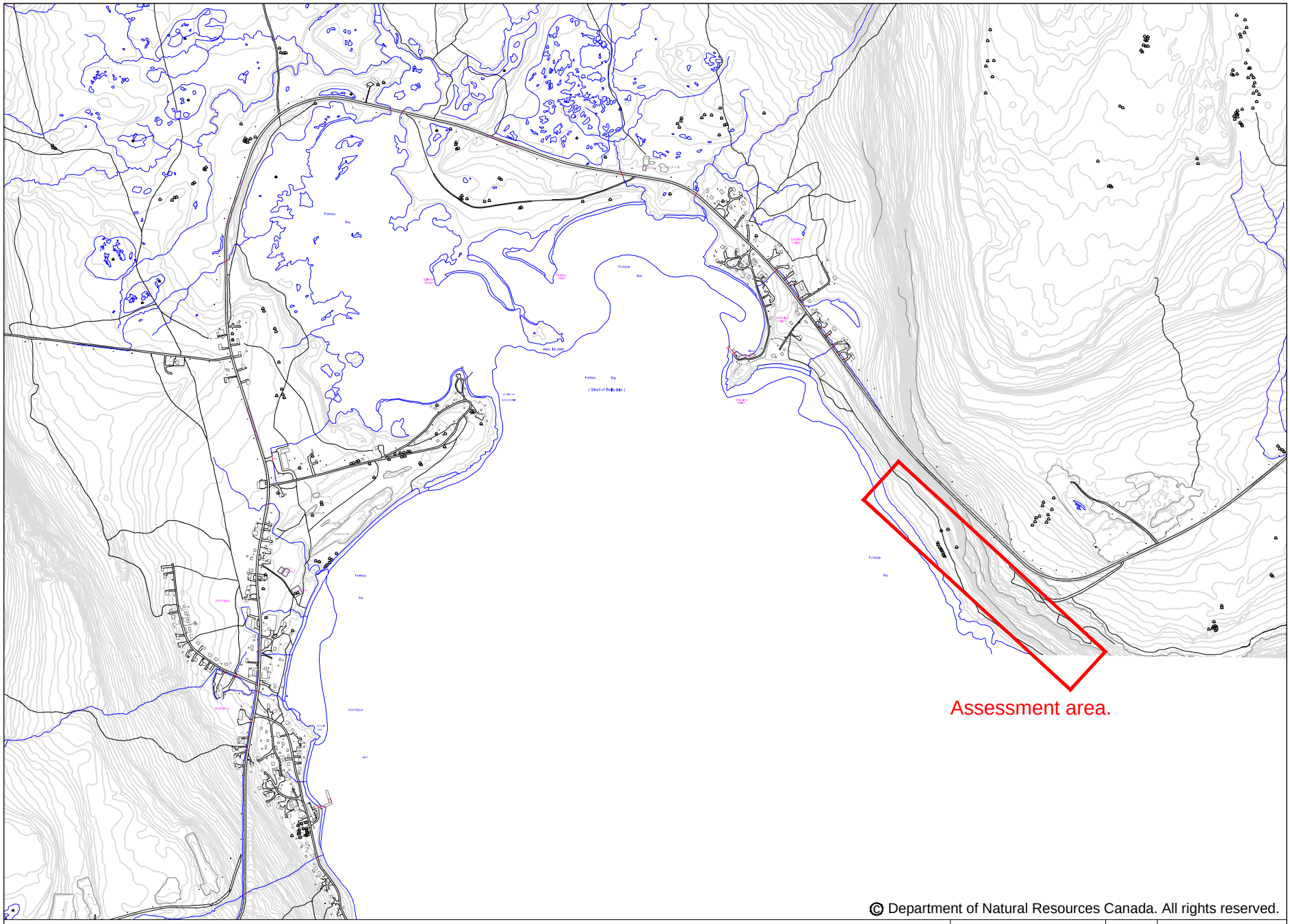
Appendix A

Appenddx B – Forteau Waypoints Nad 83

NAME	DATE	ZONE	EASTING	NORTHING	ELEVATION
012	15-SEP-12	21U	505811	5702735	-3m
Aprxend	15-SEP-12	21U	506184	5702544	-6
CH10WA	20-SEP-12	21U	505488	5703135	4m
CH11W	20-SEP-12	21U	505542	5703051	-2m
CH12W	20-SEP-12	21U	505527	5703075	1m
CH13RE	20-SEP-12	21U	505546	5703097	1m
CH14RE	20-SEP-12	21U	505514	5703144	8m
CH1CLIFF	20-SEP-12	21U	506169	5702619	29m
CH2	20-SEP-12	21U	505865	5702868	45m
CH4	20-SEP-12	21U	505796	5703024	68m
CH5FE	20-SEP-12	21U	505727	5703030	50m
CH6	20-SEP-12	21U	505758	5703071	71m
CH7	20-SEP-12	21U	505712	5703063	44m
CH8TRAP	20-SEP-12	21U	505687	5703115	34m
CH9	20-SEP-12	21U	505492	5703153	5m
CHF8	20-SEP-12	21U	505406	5703238	-4m
CH31	20-SEP-12	21U	505584	5703067	12m
CH34	20-SEP-12	21U	505646	5703000	8m
CH35URE	20-SEP-12	21U	505638	5702997	12m
CH36URE	20-SEP-12	21U	505629	5702990	7m
CH37URE	20-SEP-12	21U	505572	5703064	3m
CHT1	20-SEP-12	21U	505516	5703151	0m
CHT2	20-SEP-12	21U	505534	5703155	4m
CHT3	20-SEP-12	21U	505555	5703157	-2m
CHT4	20-SEP-12	21U	505553	5703146	12m
CHT5	20-SEP-12	21U	505540	5703137	10m
CHT6	20-SEP-12	21U	505531	5703133	7m
CHT7	20-SEP-12	21U	505521	5703129	6m
CHT8	20-SEP-12	21U	505524	5703117	8m
CHT9	20-SEP-12	21U	505534	5703124	8m
CHT10	20-SEP-12	21U	505536	5703128	8m
CHT11	20-SEP-12	21U	505537	5703129	5m
CHT12	20-SEP-12	21U	505568	5703142	8m
CHT13	20-SEP-12	21U	505582	5703146	10m
CHT14	20-SEP-12	21U	505586	5703133	9m
CHT15	20-SEP-12	21U	505575	5703126	9m
CHT16	20-SEP-12	21U	505560	5703117	9m
CHT17	20-SEP-12	21U	505551	5703113	8m
CHT18	20-SEP-12	21U	505545	5703109	8m
CHT19	20-SEP-12	21U	505548	5703093	4m
CHT20	20-SEP-12	21U	505553	5703091	3m
CHT21	20-SEP-12	21U	505561	5703095	8m
CHT22	20-SEP-12	21U	505571	5703103	12m

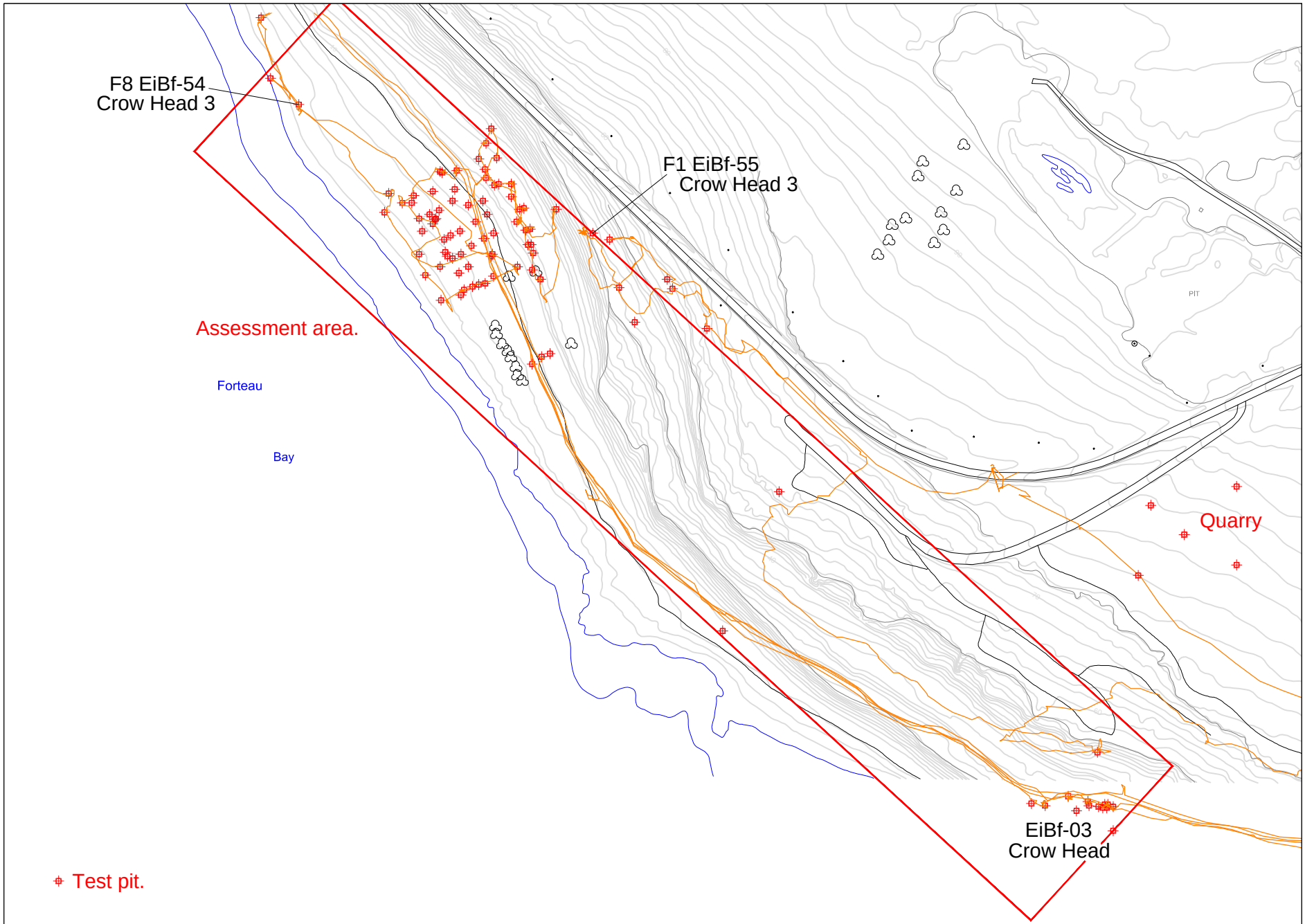
NAME	DATE	ZONE	EASTING	NORTHING	ELEVATION
CHT23	20-SEP-12	21U	505592	5703115	9m
CHT24	20-SEP-12	21U	505590	5703093	9m
CHT25	20-SEP-12	21U	505591	5703095	7m
CHT26	20-SEP-12	21U	505568	5703083	7m
CHT27	20-SEP-12	21U	505559	5703077	10m
CHT28	20-SEP-12	21U	505541	5703083	55m
CHT29	20-SEP-12	21U	505561	5703056	5m
CHT30	20-SEP-12	21U	505578	5703066	9m
CHT32	20-SEP-12	21U	505592	5703074	12m
CHT33	20-SEP-12	21U	505629	5703080	10m
CHT34	20-SEP-12	21U	505625	5703104	7m
CHT35	20-SEP-12	21U	505628	5703104	10m
CHT36	20-SEP-12	21U	505617	5703138	17m
CHT37	20-SEP-12	21U	505609	5703150	13m
CHT38	20-SEP-12	21U	505597	5703162	9m
CHT39	20-SEP-12	21U	505584	5703176	4m
CHT40	20-SEP-12	21U	505578	5703186	5m
CHT41	20-SEP-12	21U	505585	5703168	8m
CHT42	20-SEP-12	21U	506252	5702827	-
CHT43	20-SEP-12	21U	506220	5702855	-
CHT44	20-SEP-12	21U	506302	5702798	-
CHT45	20-SEP-12	21U	506302	5702873	-
CHT46	20-SEP-12	21U	506208	5702788	-
CHU23	20-SEP-12	21U	505583	5703110	11m
Depression	15-SEP-12	21U	505521	5703095	-3m
DockbankS	20-SEP-12	21U	505615	5703083	7m
DockbeachS	20-SEP-12	21U	505564	5703061	5m
F1	20-SEP-12	21U	506149	5702563	-3m
F2	20-SEP-12	21U	506161	5702568	2m
F3	20-SEP-12	21U	506176	5702569	7m
F4	20-SEP-12	21U	506178	5702566	3m
F5	20-SEP-12	21U	506174	5702566	8m
F12	20-SEP-12	21U	505585	5703201	6m
FD1	20-SEP-12	21U	505541	5703174	7m
FD2	20-SEP-12	21U	505543	5703173	8 m
FD3	20-SEP-12	21U	505557	5703175	9 m
FD5	20-SEP-12	21U	505637	5703071	14 m
FD6	20-SEP-12	21U	505630	5703096	10 m
FD7	20-SEP-12	21U	505623	5703118	10 m
FD8	20-SEP-12	21U	505627	5703119	9 m
FD9	20-SEP-12	21U	505614	5703126	8 m
FD10	20-SEP-12	21U	505621	5703139	7m
FD11	20-SEP-12	21U	505609	5703162	5m
FD13	20-SEP-12	21U	505590	5703215	6m
FD15	20-SEP-12	21U	505595	5703187	3m

NAME	DATE	ZONE	EASTING	NORTHING	ELEVATION
FORTEAUR1	20-SEP-12	21U	505505	5703144	3m
FORTEAUR2	20-SEP-12	21U	505593	5703161	15m
ForteauR3	20-SEP-21	21U	505652	5703138	26m
FORTEAUR4	20-SEP-12	21U	505703	5703109	35 m
FORTEAUR5	20-SEP-12	21U	505763	5703062	53m
FORTEAUWEST		21U	505379	5703263	-5m
Pathturn	15-SEP-12	21U	505370	5703321	-4m
Rockcir1	15-SEP-12	21U	506106	5702570	0m
Rockcir2	15-SEP-12	21U	506119	5702568	0m
Rockcir3	15-SEP-12	21U	506184	5702567	1m
Rockcir4	15-SEP-12	21U	506179	5702569	0m
Rockcir5	15-SEP-12	21U	506170	5702567	-0m
Rockcir6	15-SEP-12	21U	506160	5702572	1m
Rockcir7	15-SEP-12	21U	506141	5702577	



Map of Assessment Area. | Scale 1:20000 | Appendix C

GERALD PENNEY ASSOCIATES LIMITED.



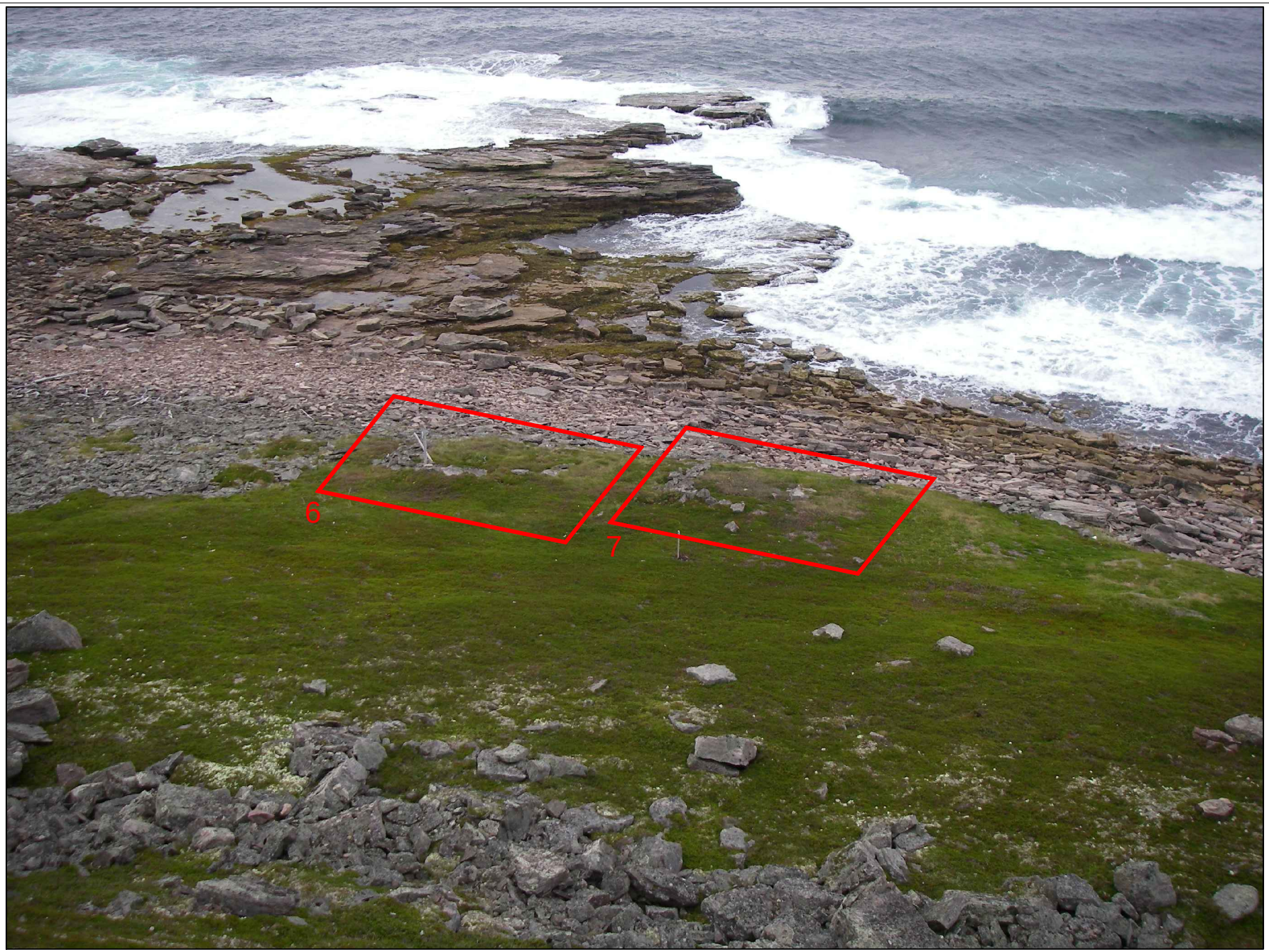
Map of Test pits, Features, Sites and Footpath.

Scale 1:5000

Appendix D

Oblique photograph of Features 1- 5, EiBf-3.

Appendix E



Oblique photograph of Features 6 - 7, EiBf-3.

Appendix F

Appendix F

Provincial Archaeology Office Letter

Newfoundland Labrador

Government of Newfoundland
and Labrador
Department of Tourism Culture and Recreation
Provincial Archaeology Office

Mr. KC Dhiraj
Bay Bulls Properties Ltd.
P.O. Box 1083
650 Water Street
St. John's, NL
A1C 5M5

October 26, 2012

Dear Mr. Dhiraj:

Re: Mitigation Required in Proposed Laydown Area/Wharf & Access Road in Forteau, Labrador, Crown Land Application Numbers 141520 & 141 521

The Provincial Archaeology Office (PAO) has received a report from archaeologist, Mr. Gerald Penney, indicating that an archaeological assessment has been completed for the proposed laydown area and location for a wharf/access road at Crow Head in Forteau, Labrador. As a result of the investigations an existing archaeological site and two new sites were identified; these sites will be negatively impacted by development as currently proposed.

Subsequent to the assessment being carried out you advised that two of the archaeological sites located in the proposed laydown area (EiBf-03 and EiBf-54) can be avoided. EiBf-03 is composed of seven stone features. The second site (EiBf-54) is a stone feature of unknown function, and is located approximately 1.1 km NW of EiBf-03.

A 20 metre buffer is required around EiBf-03 and a 15m buffer around EiBf-54 where no ground disturbing activities are to occur. The eight stone features associated with the two sites must be clearly marked with brightly coloured flagging tape so they can be easily seen by workers in the area. All personnel involved in construction activities for the project are to be advised there is to be no disturbance within the buffer zones.

The third site that was identified (EiBf-55) is a fox trap that is located directly within the proposed route for the access road. If the access road route remains as presently proposed, the fox trap will have to be fully recorded and systematically dismantled. Some excavation may also be required. The PAO has identified a secure area in Labrador where the stones can be stored.

If there are any changes to be made within the proposed project footprint, such as re-routing the access road, location change for wharf/laydown area, or any new areas to be impacted, the PAO is to be consulted for approval.

If you have any questions or require further information please do not hesitate to contact me at 729-2462 or Delphina Mercer at 729-4142.

Sincerely,

Martha Drake

Martha Drake
Provincial Archaeologist

c Labrador Regional Lands Office
Town of Forteau
Paul Carter, Environmental Assessment Division

Appendix G

DFO Fish Habitat Approval Letter

Fisheries and Oceans Canada | Pêches et Océans Canada

PO Box 5667
St. John's NL A1C 5X1

Your file *Votre référence*

February 26, 2013

Our file *Notre référence*
12-HNFL-NA6-00102
BAB 3970-106

Ms. Deidre Puddister
Bay Bulls Properties Ltd.
1309 Topsail Road
PO Box 8274 Stn. A
St. John's NL A1B 3N4

Dear Ms. Puddister:

Subject: Proposal not likely to result in impacts to fish and fish habitat provided that standard mitigation measures are applied.

Fisheries and Oceans Canada - Ecosystems Management Branch – Fisheries Protection Program (DFO) received your proposal on June 28, 2012. Please refer to the file number and title below:

DFO File No.: 12-HNFL-NA6-00102

Title: **BAY BULLS PROPERTIES PROPOSED ROCK LOADING WHARF AND LAYDOWN AREA, FORTEAU, LABRADOR**

You may be aware of recent changes to the *Fisheries Act*; however these have not affected the review of your project at this time. For more information on current changes to the *Fisheries Act*, as well as changes taking effect in the coming months, please refer to the DFO website http://www.dfo-mpo.gc.ca/habitat/habitat-eng.htm.

Your proposal has been reviewed to determine whether it is likely to result in impacts to fish and fish habitat which are prohibited by the habitat protection provisions of the *Fisheries Act*, or by those prohibitions of the *Species at Risk Act* that apply to aquatic species.*

Our review consisted of:

- the original project description received on June 28, 2012;
- a benthic survey report and DVD received on July 27, 2012;
- revised drawings/calculations regarding a change of project location received on September 24, 2012; and

*Those sections most relevant to the review of development proposals include 20, 22, 32 and 35 of the *Fisheries Act* and sections 32, 33 and 58 of the *Species at Risk Act*. For more information please visit www.dfo-mpo.gc.ca.

Canada

.../1

- a letter received on January 22, 2013 from Mr. Frank Flynn, a local fish harvester.

We understand that you propose to:

- infill a portion of Forteau Bay to create a new wharf and loading facility to allow the berthage and loading of large ocean going vessels. The proposed infill area will measure approximately 80 m (wide) x 140 m (long) for a total footprint of 11,200 m^2; and

- construct two rock-filled timber cribs (12.2 m x 12.2 m x 12.5 m (high) each) to support loading cranes and vessel gangways. Each timber crib will be placed on the seaward end of the above noted infill area and will have a total footprint of ~ 297 m^2.

To reduce potential impacts to fish and fish habitat we are recommending that the following mitigation measures be included in your plans:

1. *Machinery should arrive on site in a clean, washed condition and be maintained free of fluid leaks.*

2. *The direct in water use of heavy equipment is not permitted. The operation of such equipment must be from dry stable locations.*

3. *Waste materials should not be deposited in inland or tidal waters.*

4. *Ballast material should not be collected from below the high water mark.*

5. *Construction materials deposited in water should be free of silt and sediment.*

6. *Untreated or pressure treated wood is preferred for the construction of timber cribs. Materials treated with pentachlorophenol (PCP) or creosote should not be used.*

7. *The proposed construction activities must be carried out in such a manner that sediment, and/or other construction related materials do not enter Forteau Bay or any other adjacent water course (e.g. use of silt curtains, filter fabric dams, settling ponds etc.).*

8. *Rock material should not be end dumped; rather it should be placed on dry stable areas and put in position using an excavator or similar equipment to avoid excessive splashing and/or displacement of existing substrate.*

9. *To the extent possible, the proposed work should be carried out during low tide and low wind/wave conditions to minimize turbidity and to minimize the area that might be affected by turbidity.*

10. *Shoreline areas disturbed during the proposed activities must be stabilized to prevent erosion.*

.../2

Provided that the mitigation measures described in the attached are incorporated into your plans, DFO has concluded that your proposal is not likely to result in impacts to fish and fish habitat, and you will not need to obtain a formal approval from DFO in order to proceed with your proposal. It remains your responsibility, however, to meet the requirements of any other federal, provincial and municipal agencies.

If your plans have changed or if the description of your proposal is incomplete you should consult our website to determine if a DFO review is required, and if so contact this office to determine if the advice in this letter still applies.

Please be advised that any impacts to fish and fish habitat which result from a failure to implement this proposal as described or incorporate the additional mitigation measures included in this letter could lead to corrective action such as enforcement. In addition, under the *Fisheries Act*, there is a requirement to notify DFO of any harmful alteration or disruption, or any destruction of fish or fish habitat that has not been authorized.

Please notify this office at least 10 days before starting the work. A copy of this letter should be kept on site while the work is in progress.

If you have any questions please contact Richard Van Ingen at our DFO Regional Headquarters in St. John's office at 709-772-3478, by fax at 709-772-5562 or by email at richard.vanIngen@dfo-mpo.gc.ca.

Yours sincerely,

Carole Grant

Carole Grant
Section Head, Marine Habitat
Habitat Protection Division

el/cg

Appendix H

Public Information Session Report

Report on the Public Information Session
Forteau Quarry, Wharf and Laydown Area

Submitted to:

Bay Bulls Properties Ltd
650 Water St.
P.O. Box 1083, St. John's, NL
A1C 5M5

Submitted by:

Sikumiut Environmental Management Ltd.
P.O. Box 39089, St. John's, NL
A1E 5Y7

May 28, 2013

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4.3 Project Specific 5
5.0 CONCLUSION 6

Appendices

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APPENDIX B Posters

APPENDIX C Meeting Registry

APPENDIX D Meeting Notes

1.0 CONTEXT

Bay Bulls Properties Ltd. was responsible for conducting a Public Information Session as part of the Environmental Preview Report for the Forteau Quarry, Wharf and Laydown Area. The meeting was held on the evening of May 28th, 2013, at the John A. Dumaresque Town Centre in Forteau, NL.

Sikumiut Environmental Management Ltd. (SEM) was engaged by Bay Bulls Properties Ltd. to provide logistical and facilitation services to arrange and conduct the Public Information Session (meeting). In addition, one SEM employee attended the meeting to document the outcome and to provide general assistance.

2.0 MEETING NOTIFICATION

Notice of the Public Information Session was given as per the EPR guidelines. Please see Appendix A for a copy of this notice. The Public Notice was advertised as follows:

- Notices were placed in the Town Hall and local Post Office of Forteau, NL, for one full week prior to meeting date.

- A notice was placed in *The Northern Pen*, for one full week and one weekend preceding the meeting date.

- Notice was given to Honourable Tom Hedderson, Minister of Department of Environment and Conservation, one full week prior to the meeting date.

3.0 MEETING FORMAT

Mr. David Elliott, General Manager, Mr. Dhiraj KC, Site Engineer, Ms. Deidre Puddister, Environmental Manager, and Mr. Rod Mercer, Aggregate & Mineral Resources Manager, represented the Proponent for all aspects of the Public Information Session. Mr. Bevin LeDrew of SEM coordinated logistics and facilitated the meeting. Members Mr. Paul Carter, Environmental Scientist, Department of Environment and Conservation, and Mrs. Delphina Mercer, Provincial Archaeologist, Department of Tourism, Culture and Recreation, were also present to observe the meeting.

The Open House Public Information Session was held on May 28, 2013, at 5 pm at the John A. Dumaresque town centre in Forteau, NL. As laid out in the Guidelines for the Environmental Preview Report, the purpose of this meeting was to present the public with the information pertaining to the project, and to also answer any questions about the project. The session was set up as an Open House format, and anyone from the public could attend. At the request of one attendee, a sit down session was held when attendance was at a peak (approximately 30 persons present). Following a presentation that followed the posters – (introduce the Proponent, explain the Environmental Assessment process, describe the project, identify the issues to be addressed in the EPR), a question and answer period occurred. Once all had the opportunity to speak, the meeting reverted to the Open House style meeting.

Four different 2 x 3 ft posters were set up, and each poster had a Proponent member to explain the poster and answer any questions from the public. Please see Appendix B to view the content of each poster. The posters were titled:

- The Proponent,
- The Project,
- The Environmental Assessment Process, and
- Issues to be addressed in the Environmental Assessment.

An estimated total of 30 individuals attended the meeting, See Appendix C for the attendance list based on the registry. Note, not all attendees signed the registration.

4.0 ISSUE IDENTIFICATION

The Public Information Session was very active and very positive; no individual expressed strong opposition to the project. The mayor of Forteau, on behalf of the Town Council, indicated that the community does support the project, and had nothing negative to say about the project. Meeting participants were mostly interested in how the project will be carried out. They wanted to make sure that it will be done in a manner that does not affect the environment, in a way that minimizes the potential disturbances to the community, while providing job opportunities to the local residents. Notes from the public information session can be found in Appendix D and the following sections describe what was discussed at the meeting.

4.1 Community Benefits

Participants wanted to know about the job opportunities for the local residents. The Proponent indicated that a hiring preference will be given to qualified local residents. The numbers and types of jobs at each stage of the work were summarized on Poster 2, and the participants were encouraged to read both the project registration and the EPR (once it is issued).

Participants questioned the long term potential for the proposed wharf. The Proponent stated that the proposed wharf has been designed to meet the project requirements, and has offered a first right of refusal to the community of Forteau to find an alternative use for the wharf when it is no longer required by the company.

4.2 The Effect on the Community and Local Environment

Some participants asked about the amount of noise and dust disturbances that may occur from this project. One participant stated that he lived approximately one km away from the proposed site location and was concerned about these disturbances. The Proponent stated that noise and dust will depend greatly on wind speed and direction. Based on experience with many quarries, there will be no disturbance expected at a distance of one km from the operation due to the prevailing South-west wind in the area. Noise and dust will be away from the community.

The Proponent also stated that one major advantage of this project is the compact nature of its footprint and the ability to avoid the use of public roads for truck traffic. This will greatly reduce the potential for noise, dust, road wear, and traffic congestion that would be created by such traffic. In addition to the proximity of the quarry site to the shoreline, the natural contours of the landscape will provide a buffer for noise and dust spread.

Participants wanted to know what the visual effects will be from the project. The Proponent indicated that a viewshed analysis will be completed. They also indicated that the available locations to view the site are limited. The viewshed analysis will be conducted from both the highway and from across the bay. The Proponent has extensive experience with quarry developments and will work to optimize the development to minimize visual impact where possible. The compact nature of the site and the natural contours of the landscape shall act to reduce the visual effect. Also, the Proponent indicated that site rehabilitation shall be in keeping with government regulations, therefore a suitable rehabilitation plan will be developed and bonding available to assure the completion of such work.

Participants stated that while there is relatively low usage of the Pioneer Footpath Trail, they would like to know the details of the potential effects on the trail and would like to see the use of a detour. The Proponent indicated that appropriate signage will be placed on the road access for the trail to let people know to bypass the approximate two km section that will be affected by the Laydown Area and Wharf. The Proponent also indicated that there is already an existing parking area on either side of the proposed detour, so the effect on a hiker should be greatly reduced. Once the project is completed, and the site rehabilitated, an easement will be established along the existing route of the trail.

Participants wanted to know what will be done to protect archaeology resources in the area. The Proponent indicated that Historic Resources Overview Assessment (HROA) assessments have been completed and the PAO has advised to leave a buffer of about 20 m on two sites located in the Laydown area. These two sites will be clearly marked with brightly colored marking tape and no ground disturbance will be done within the buffer zone. The third site (Fox Trap site) located within the proposed access road, will be fully recorded, systematically dismantled, and

stored in a secure area as identified by the PAO. The quarry site held no historic potential. The area was investigated; subsurface test pitting identified no historic resources.

4.3 Project Specific

One participant questioned the quality of the rock, and if it is suitable for the intended use. The Proponent indicated that it is suitable, and that the appropriate test samples have been collected from drilling that shows that the rock does meet the specifications.

Participants wanted to know about the schedule for the proposed work. They wanted to know about the timing for the start of this work. The Proponent indicated that the schedule given by Nalcor, for the award of this contract, would see work beginning early Spring of 2014. Once a contract is awarded, it will take one season to prepare the site and build the wharf. Operations are expected to last two years, and rehabilitation will take an estimated five months.

Participants wanted to know what size blast will be used in the quarry. The Proponent indicated that a detailed blasting plan is to be developed. It is expected that a total of three to four blasts will be required for the project. Blasting will be scheduled ahead of time at a set time (usually between 5 and 6 pm), and the public will be provided with an appropriate notice of blasts.

5.0 CONCLUSION

The Public Information Session was a success. It was very well received and most people expressed a very positive attitude towards the project. There were no major issues or concerns regarding the project. The issues that were brought up by the meeting attendees considered community benefits, effects of the project on the community and local environment, and project specific issues. The Proponent has mitigation measures put in place for all issues that were identified at this Public Information Session.

APPENDIX A

Public Notice

PUBLIC NOTICE

Public Information Session on the Proposed

Forteau Quarry, Wharf
and Laydown Area
Forteau, NL

shall be held at *5pm*
Tuesday, May 28
at the
John A. Dumaresque
Town Center

This session shall be conducted by the Proponent,
Bay Bulls Properties Ltd., (709) 334-2820
as part of the environmental assessment for this Project.
The purpose of this session is to describe all aspects of the proposed Project,
to describe the activities associated with it, and to provide an opportunity for all interested persons to request information or state their concerns.

ALL ARE WELCOME

APPENDIX B

Posters

Forteau Quarry, Wharf and Laydown Area Project

THE PROPONENT

Bay Bulls Properties Ltd.
650 Water St.
P.O. Box 1083
St. John's, NL
A1C 5M5

Contact Person:	David Elliott Phone: (709) 334-2820 E-mail: delliott@pennecon.com
Chief Executive Officer:	Edward Murphy Phone: (709) 782-3404 E-mail: emurphy@pennecon.com
Line of Business:	Sub-Contractor for a bid to NALCOR – Lower Churchill Project

Forteau Quarry, Wharf and Laydown Area Project

THE PROJECT

- **Lower Churchill**
  - Straits Cable Crossing
- **Rock Protection for Underwater Cable**
- **Requires 700,000 Tonnes of Rock**
- **Construction (1 Season)**
  - Quarry Development
  - Access
  - Laydown Area
  - Wharf
  - 25-30 Jobs
- **Operation (2 Seasons)**
  - Blasting
  - Truck Haulage
  - Storage
  - Vessel Loading
  - 40-50 Jobs
- **Closure and Rehabilitation (5 Months)**
  - Quarry
  - Laydown Area
  - Wharf
  - 5-10 Jobs

Forteau Quarry, Wharf and Laydown Area Project

THE ENVIRONMENTAL ASSESSMENT PROCESS

- Project Registration
- Minister's Decision
  - Environmental Preview Report
- EPR Guidelines Issued
- Public Consultation Meeting
- Prepare EPR
- Government Review
- Minister's Decision
- Upon Approval
  - Permits, Authorizations
- Commence Project

Forteau Quarry, Wharf and Laydown Area Project

ISSUES to be ADDRESSED in ENVIRONMENTAL ASSESSMENT

ISSUE	APPROACH TO RESOLUTION
Community Effects (noise, visual)	• Calculate Zones of Influence
Pioneer Footpath Trail	• Detour, Signs
Archaeological Sites	• Site Assessments Completed • Remediation Measures in Place (PAO)
Shoreline – Laydown Area	• Rehabilitation Planning
Visual Effects	• Traffic Routing • Viewshed Analysis
Tourism	• Viewshed Analysis

APPENDIX C

Meeting Registry

Bay Bulls Properties Ltd. → 30 + Paul + Delphine Sikumiut

Sign In Sheet

Event: Forteau Quarry, Wharf, and Laydown Area Location: Forteau, NL

Name	Phone	Email Address	Affiliation
Craig Flynn	931-2011	craigrodflynn@hotmail.com	
Ivan Flynn	9312287		
Robert [illegible]	931 2691		
James Hancock JR	931 2444	hancocks distribution	@yahoo.ca
James Roberts	931 2292	Jims.garage@hotmail.com	
[illegible]	931 2201	[illegible]	
[illegible]	931 2495	Forteau Lot	
Darcy Hallett	931 1491	Forteau, NL	darcy.hallett@nlsd.ca
William Saulter	931 1490		
[illegible]			
BRIAN BUGDEN	728 1491	bbugden@yahoo.ca	
Rose Flynn			
[illegible]	Bear	[illegible]	
Helen Buckle	—	English Point	
Philip Buckle		English Point	
Margaret Saulter	931-2290	Forteau	
Pearl Buckle	931-2700	Forteau	
Lorraine Michael	721-2270	lamm15@gov.nl.ca	NL NDP
JASON SPINGLE	632-9434	jspingle@ffaw.net	" "
Bear Belbin	931-2620		
Wilson Belbin	931-2254	Wbelbin57@hotmail.com	

Bay Bulls Properties Ltd.

Sikumiut

Sign In Sheet

Event: Forteau Quarry, Wharf, and Laydown Area Location: Forteau, NL

Name	Phone	Email Address	Affiliation
Cecil Butt	931-2257		
Tony Flynn	931-2903		
Barry Buckle	931 2104		

APPENDIX D

Meeting Notes

Public Meeting on the Proposed Forteau Quarry, Laydown and Wharf Project

Held Tuesday May 28 2013500pm – 700pm

At the

Forteau Community Centre

Attending

(Proponent Team)

Dave Elliott

Rod Mercer

Deidre Puddister

Dhiraj KC

Bevin LeDrew (SEM Ltd.)

From the Project Environment Committee (observers):

Paul Carter (Environmental Scientist, Department of Environment and Conservation) Delphina Mercer (Provincial Archaeologist, Department of Tourism, Culture and Recreation)

Public Attendance

See attached sign-up sheet. A count of 30 attendees was made during the peak of the meeting. A total of 24 individuals signed in at the session (see Appendix A).

Chronology of the Meeting

Notices had been posted in the Community Centre and in the local newspaper. During the afternoon, the Proponent Team set up posters, registration desk and associated material. The Anglican Ladies Auxiliary provided refreshments.

At 500pm people started to show up and by 530pm approximately 20 were present. One individual requested that the company hold a town hall style meeting, so it was agreed that a sit down presentation would be given. Chairs were set out and the study team explained that a short presentation would be given, followed by a question and answer session, after which the meeting would revert to the open house format to be sure that any who might be reluctant to ask questions before a group would have the opportunity to engage in one-on-one discussion with members of the proponent team.

Bevin LeDrew chaired the town hall session. He provided a description of the Proponent, the regulatory process for environmental assessment, the stages and aspects of the proposed project, and the concerns that have been identified to date. This was followed by a question and answer period. All participants were encouraged to ask questions, and once repeat questions were received from the same individuals, priority was given to those who had not previously spoken.

By 630pm everyone present had been given an opportunity to ask a question or make a comment. The town hall session was then adjourned and the meeting reverted to the open house style. The session ended a little after 700pm by which time the last member of the public had left.

The following summarizes the questions and answers exchanged during both the town hall session as well as during the open house portions of the meeting:

Q What is the long term potential for the wharf?

A. The wharf has been designed to meet the project requirement, but the Proponent has offered a right of first refusal to the Community of Forteau to find an alternate use for the wharf when no longer required by the company.

Q. How much noise and dust will be created? I live about a kilometre away and am concerned about these disturbances.

A. Noise and dust will depend greatly on wind speed and direction. Based on experience with many quarries, there will be no disturbance expected at a distance of one kilometre from the operation. The prevailing South-west wind in the area will direct noise and dust away from the community. One major advantage of this project is the compact nature of its footprint and the ability to avoid the use of public roads for truck traffic. This will greatly reduce the potential for noise, and dust as well as road wear and traffic congestion that would be created by such traffic. In addition to the proximity of the quarry site to the shoreline, the natural contours of the landscape will provide a buffer for noise and dust spread.

Q. While acknowledging that there is relatively low use made of the Pioneer Footpath Hiking trail, details of the proposed effect on the trail and the use of a detour were requested.

A. Signage will be placed at the road accesses for the trail advising that people should bypass the (approximately 2 km) section that will be affected by the laydown area and wharf. There is an existing parking area either side of the proposed detour, so the effect on a hiker should be greatly reduced. Once the Project is completed and the site rehabilitated, an easement will be established along the existing route of the trail.

Q. What are the possibilities for jobs for local residents?

A. A hiring preference will be given to qualified local residents. The numbers and types of jobs at each stage of the work were summarized on the posters and people encouraged to read both the Project Registration and the EPR (once issued).

Q. Is the rock quality suitable for the intended use?

A. Yes. Test samples have been **collected** from drilling and the rock meets specifications.

Q. What will be the visual effect of the project?

A. A viewshed examination will be completed. The available locations to view the site are limited. We will examine the view from the highway and from across the bay. The proponent has extensive experience with quarry developments and will work to optimize the development to minimize visual impact where possible; note that the compact nature of the site and the natural contours of the landscape will serve to reduce the visual effect. As well, site rehabilitation shall be in keeping with government regulations, therefore a suitable rehabilitation plan will be developed and bonding available to assure the completion of such work.

Q. What is the timing for start of this work?

A. The schedule given by Nalcor for the award of a contract would see work beginning by early spring of 2014. Once a contract is awarded, it will take one season to prepare the site and build the wharf. Operations will last two years. -Rehabilitation will take an estimated five months.

Q. What size of blast will be used in the quarry?

A. A detailed blasting plan is to be developed. We expect that charges will be sized to produce in the order of 250,000 tonnes per blast, resulting in a total of only 3 to 4 blasts for the project. Blasting will be scheduled for a set time (e.g. Between 5 to 6 pm) and the public will be provided with appropriate notice of blasts.

Q. The Mayor, on behalf of the Town Council, stated that the community supports the project.

A. This statement of support was acknowledged. It was noted that several community leaders were present and there appeared to be general concurrence among the attendees as no one expressed a differing view.

Q. What is to be done to protect archaeology resources?

A. Historic Resources Overview Assessment (HROA) has been completed and the Provincial Archaeology Office (PAO) has advised to leave a buffer of about 20 m on two (2) sites located in the laydown area. These two (2) sites will be clearly marked with brightly coloured marking tape and no ground disturbance will be done within the buffer zone. The third site (fox trap site)

located within the proposed access road will be fully recorded, systematically dismantled and stored in a secure area as identified by the PAO.

The quarry site held no historic potential. The area was investigated; subsurface test pitting identified no historic resources.

Note:

While the session was a very active one, no individuals expressed opposition to the project; rather people were concerned that the project be carried out in a manner that protects the environment, minimizes disturbance to the community and provides work opportunities to local residents.

Bevin LeDrew

From notes taken May 28, 2013