



**ENVIRONMENTAL IMPACT ASSESSMENT (EIA)  
REGISTRATION, TRAFFIC IMPACT STUDY (DRAFT REPORT),  
AND WATER SUPPLY SOURCE ASSESSMENT (WSSA):  
CAMPING PLAGÉ ABOITEAU BEACH, CAP-PELÉ, NB**

**Prepared for:**

Camping Plage Aboiteau Beach Inc.

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## GENERAL INFORMATION

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J.R. Daigle Engineering is pleased to present the following document as an Environmental Impact Assessment (EIA) Registration on behalf of Camping Plage Aboiteau Beach Inc. (the “Proponent”) for the proposed campground development: Camping Plage Aboiteau Beach (the “Campground”). The Project is located in Cap-Pelé, New Brunswick, in the municipality’s Parc de l’Aboiteau area.

The Project is an “Undertaking” under the New Brunswick Regulation 87-83, the *Environmental Impact Assessment Regulation - Clean Environment Act*, as described by item (p) of Schedule “A”: “all major recreational or tourism developments, including developments which consist of changing the use of land so that it is used for recreational or tourism purposes”. Additionally, the Campground’s water supply wells are anticipated to yield more than 50 m<sup>3</sup>, therefore falling under the description of item (s): “all waterworks with a greater than fifty cubic metres of water daily.” As per Section 5(1) of the EIA Regulation, the Undertaking must therefore be registered. A review will be coordinated with the New Brunswick Department of Environment and Local Government (NBDELG).

A Water Supply Source Assessment (WSSA) has been initiated by GEMTEC Ltd. in support of the EIA. The goal of this study is to demonstrate that the local aquifer can sufficiently provide the potable water demand associated with the proposed Project without having any adverse effect on the water supply and its existing users. The WSSA will be completed in compliance with the NBDELG “Water Supply Source Assessment Guideline” (March 2014), and any tests will be carried out with the Minister’s approval. Pumping tests will be conducted outside of the groundwater recharge season, which typically occurs from October to December and from mid-March to end of May. Further specifications for pumping tests conditions are described in section 3.0 of the WSSA Guideline. More information is available in the WSSA Initial Application included in Appendix B.

Additionally, a preliminary Traffic Impact Study Report (TIS) was completed by GRIFFIN Transportation Group Inc. in support of the approval process of this project. This study evaluates the impact that the additional traffic generated by the proposed Campground may have on the existing intersection of Allée de la Plage and Route 133 (Chemin Acadie). The study reveals that the subject intersection can adequately accommodate the expected generated traffic, and with the study recommendations, the anticipated traffic volume resulting from the proposed campground will have an acceptable level of impact on the primary access and intersection of Route 133 / Allée de la Plage.

## 1.0 THE PROPONENT

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- i. **NAME OF THE PROPONENT:** Camping Plage Aboiteau Beach Inc.
  
- ii. **ADDRESS OF PROPONENT:** Camping Plage Aboiteau Beach Inc.  
151, rue Robichaud  
Cap-Pelé, NB E4N 1Y5
  
- iii. **PRINCIPAL CONTACT PERSON FOR PURPOSES OF EIA:** Mr. François Richard  
Tel: (506) 533-4278  
Email: [francoismrichard@hotmail.com](mailto:francoismrichard@hotmail.com)  
151, rue Robichaud  
Cap-Pelé, NB E4N 1Y5
  
- iv. **PROPERTY OWNERSHIP:** PID 70314075 (55 Allée du Parc)  
Lot 15-01 to be created (Tentative Subdivision Plan - Appendix A)  
Owner: N.B. Natural Resources and Energy  
Lessee: Corporation du Parc De l'Aboiteau  
To be sub-leased by Plage Aboiteau Beach Camping Inc.  
The Proponent is in the process of lease negotiations with the property owner/lessee.

An email (dated December 13, 2016) from Willy Wilondja, Project Manager for the Approvals Section of the Department of Energy and Resource Development, expresses his consent to proceed with the planning process for the proposed development. A copy of the correspondence is available in Appendix F (in French).

## 2.0 THE UNDERTAKING

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- i. **NAME OF THE UNDERTAKING:**

Aboiteau Campground

- ii. **PROJECT OVERVIEW**

The proposed Project is located in Cap-Pelé, New Brunswick, on a 29-acre portion of PID 70314075 identified as lot 15-01, to be registered (Tentative Subdivision Plan included in Appendix A). The proposed development will accommodate a total of 273 RV campsites, in addition to various facilities and services associated with the campground. The site is located approximately 400 metres north of Route 133 (Chemin Acadie), which serves as the primary rural collector roadway, and is accessed by Allée de la Plage, a public roadway presently used to access a 40-unit cottage development (Chalets de l'Aboiteau Cottages) located adjacent to the proposed site. It is understood that each of these cottages are individually owned, but are mostly rented during the summer months. The site is also located in vicinity of Aboiteau Beach and Aboiteau Wharf. The proposed campground will be integrated with the municipality's Parc de l'Aboiteau. A key map illustrating the general location of the site is shown in Figure 1.



**NORTHUMBERLAND STRAIT**



PROJECT TITLE:	<b>CAMPING PLAGÉ ABOITEAU BEACH CAP-PELÉ, NB</b>	
DRAWING TITLE:	<b>LOCATION MAP</b>	

IMAGERY SOURCE:	SNB - GEONB	DATE:	JANUARY, 2017
DATA SOURCE:	SNB	SCALE:	1 : 50 000
JOB No:	2016754600	FIGURE No.:	1.0

On May 16, 2014, the Village of Cap-Pelé launched a request for proposals to the public to develop the subject land for campground use. The request closed on June 3, 2014, at which time the municipality received one submission by Camping Plage Aboiteau Beach Inc. Since then, the municipal council of Cap-Pelé adopted an amended Zoning By-Law to allow the use of a campground in the PA 1 (Projet d'aménagement) Zone. A copy of the document is enclosed in Appendix E (in French).

Currently, the land is owned by the Department of Natural Resources and Energy and is leased by Corporation du Parc de l'Aboiteau Inc. operated by the Village of Cap-Pelé. The present lease agreement is set to expire in August 2017, at which point the lease is to be renewed and renegotiated to allow the proposed development. A tentative occupation & lease agreement, dated June 15, 2015, is enclosed in Appendix F (in French). The Corporation du Parc de l'Aboiteau will in turn sub-lease the land to the Camping Plage Aboiteau Beach Inc. for 20 years, renewable for an additional 20 years.

The subject land consists mostly of new-growth woods with the exception of the recreational walking/biking trail that flanks Allée des Chalets to the north. Once completed, the Campground will span a total area of approximately 7.0 hectares (17.2 acres). The proposed construction is set to begin in spring 2017 and is to be carried out in a single phase during the 2017-2018 construction periods. Figure 2 shows the proposed development and general site context.

A portion of the proposed development is located within the municipality's Sea Level Rise (SLR) Zone, meaning it is more vulnerable to threats such as storm surges, flooding, and erosion due to extreme precipitation events. Because these risks can cause serious damages, it is important to take precautionary measures protecting both infrastructures and the environment.

The proposed Project comprises of 238 fully serviced lots, including 32 pull-thru campsites. An additional 35 un-serviced campsites will accommodate tents and daily campers. In addition to the associated roads, water & sanitary sewer systems, and electrical utility lines, the Project will see several buildings (comfort stations, office & recreational hall), a pool and playground areas erected as part of the facilities that will be operated by the Campground.

Patrons of the Campground will have access to Aboiteau Beach and its facilities by vehicle (+/- 1.1 kilometres) or by foot by the use of the existing boardwalk (+/- 650 metres) that presently serves the residents of Les Chalets Aboiteau Cottages.

Once completed, the Campground will operate on a seasonal basis, from May 1<sup>st</sup> to October 14<sup>th</sup>, with an anticipated peak period of a month and half from July to mid-August. During the off-season, no activities will take place and the land and facilities will remain vacant.

An overall site map (DWG C-1) illustrating the various components of the proposed Project is included in Appendix A.

### **iii. PURPOSE/RATIONALE/NEED FOR THE PROJECT**

With a significant amount of tourist participating in New Brunswick's coastal experience, the Cap-Pelé region is an increasingly popular destination. Its beaches and attractions draw thousands of residents and tourists alike each summer. The Project will help meet the growing demand for campground accommodations for seasonal and daily campers. In addition, this type of project meets the Municipality

Plan objective to stimulate and develop the tourism industry.

Development of the Project will bring employment opportunities during the construction period of the Project. Materials and labour for the Project will be drawn from the existing supply and resources available in the surrounding communities. The Project's operation and maintenance activities will also generate seasonal employment throughout each camping period.

It is anticipated that this type of development will also stimulate economic spin-offs in the region. The development could provide opportunities for various business sectors such as consumer goods and supply industries, tourism and recreation, and food and beverage sectors within the region. In general, the Project should have a positive effect on the Socio-Economic Environment.

#### **iv. PROJECT LOCATION**

The Project is located in Cap-Pelé, Parish of Shédiac, County of Westmorland, New Brunswick. As previously mentioned, the Project Development Area (PDA) occupies a large portion of the land identified as PID 70314075. A key map showing the site's location is shown on Figure 1. The approximate latitude and longitude of the center of the Project are: 46.224694N, -64.315496W.

#### **v. SITING CONSIDERATIONS**

##### **Specific Siting Requirements and Alternative Locations**

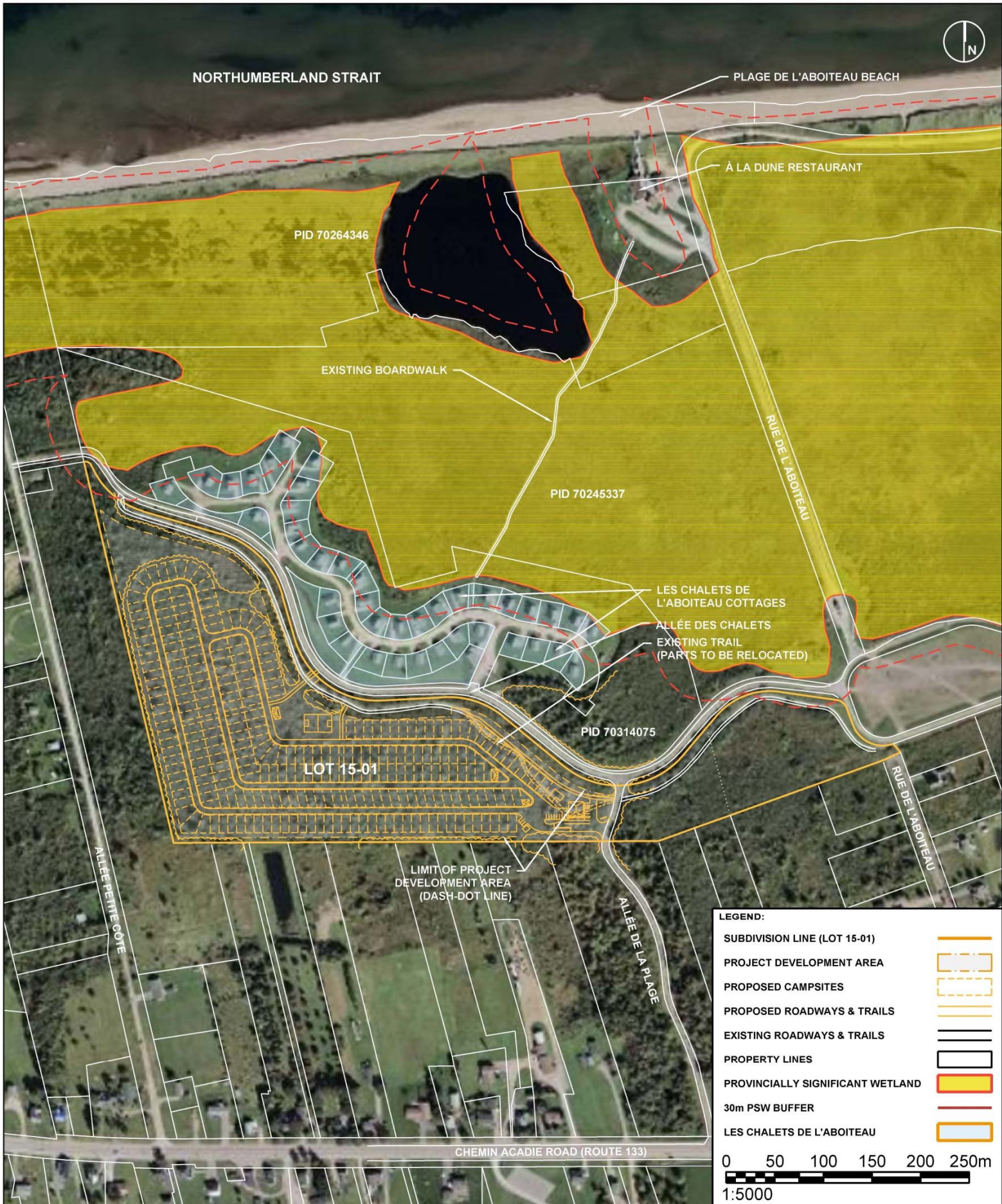
Typical siting requirements for such a project include the following:

- Land Size
- Water Supply
- Serviceability
- Suitable Soils
- Proximity to Personal & Public Services
- Accessibility to/from Main Routes
- Natural Features: Woods, Privacy, Scenic Vistas, etc.

In this case, the subject land met most of the aforementioned conditions without requiring extensive site improvements.

The Project is accessed by Allée de la Plage and Allée du Parc, two public right-of-ways which connect to the Route 133 corridor. Cap-Pelé is easily accessible from Moncton, Prince-Edward Island, and Nova Scotia by means of Highway 15. The Campground lies in proximity to various tourist amenities such as Aboiteau Beach and Aboiteau Wharf. The beach can be accessed by an existing trail and/or boardwalk operated by the municipality. The site's immediate surrounding area offers many natural features such as a wetland, creeks, scenic vistas, and wooded areas. The Campground is approximately 5 kilometres away from many of the public and personal services located in Cap-Pelé's commercial centre. Two campgrounds of similar size, Gagnon Beach and Sandy Beach Tent & Trailer Park, are located within 3 kilometres.





**LEGEND:**

- SUBDIVISION LINE (LOT 15-01)
- PROJECT DEVELOPMENT AREA
- PROPOSED CAMPSITES
- PROPOSED ROADWAYS & TRAILS
- EXISTING ROADWAYS & TRAILS
- PROPERTY LINES
- PROVINCIALY SIGNIFICANT WETLAND
- 30m PSW BUFFER
- LES CHAETS DE L'ABOITEAU

0 50 100 150 200 250m

1:5000

Currently, the land is vegetated and will need to be cleared for construction. Some minor earthwork improvements will be completed to improve drainage and to create suitable surfaces for roadways, campsites and infrastructure.

The site will receive its water from a local aquifer and will be supplied by two production wells. As part of the EIA, a WSSA has been initiated by Gemtec Ltd. (initial WSSA application attached in Appendix B). This study will determine if the aquifer will be able to supply the Campground's water demand without having any adverse effects to neighbouring properties and users.

The Campground's wastewater system will be connected to the existing municipal sanitary sewer system on Allée du Parc.

Cap-Pelé has designated the Parc de l'Aboiteau area for tourist attractions, cottages, amenities, etc. The subject land was made available by the municipality in order to promote this type of development. It is likely that this portion of the Parc de l'Aboiteau was chosen because there are no wetland or watercourse protection areas and the site is suitable for this type of development in terms of size, accessibility, and feasibility. As such, the Proponent has not made any alternative site considerations.

### **Ecological Considerations**

The PDA lies in proximity to coastal zones and a Provincially Significant Wetland (PSW) located north of the site (see Figure 2); however the project is located outside of any protected area or buffer.

### **Consultation with Local Planning Authorities**

The Project is located within the village limits of Cap-Pelé and falls under the planning authority of the Regional Service Commission – District 7 (Southeast Regional Service Commission) which serves Beaubassin, Tantramar, and Westmorland-Albert districts.

The Planning Commission was consulted early in the preliminary planning process, prior to submitting the bid for this project. The Village of Cap-Pelé carried out a zoning amendment to allow the proposed development in the PA (Projet d'aménagement) Zone. This process began in November 2015 and the amendment was adopted on February 1<sup>st</sup> 2016, under terms and conditions, including the approval of an EIA review.

## **vi. PHYSICAL COMPONENTS AND DIMENSIONS OF THE PROJECT**

### **Project Components**

The Project components include:

- Infrastructure (roadways, ditches, water and sanitary sewer systems, electrical utility lines)
- RV campsites
- Park areas
- Pool
- Buildings (receptions, comfort stations, etc.)

The various components of the PDA are shown on the attached preliminary site plan DWG C1 included in Appendix A). DWG C-2 shows the existing infrastructure (i.e. water wells, sanitary sewer line, etc.) and site topography.

### **Property Dimensions**

The total area of the PDA will measure approximately 9.4 hectares (23.23 acres). The total built area for roads, campsites, and infrastructure will comprise of approximately 7.0 hectares (17.2 acres - 75% of the total land area). The lot is irregularly shaped due to the meandering road that borders the site to the north. The PDA's southern and western boundary line measures approximately 440 and 400 metres respectively (see the Tentative Subdivision Plan in Appendix A).

### **Land Acquisition**

The subject land (PID 70314075) is owned by the Department of Natural Resources and Energy and is currently leased by Corporation du Parc de l'Aboiteau Inc. A 29-acre parcel will be subdivided (Lot 15-01) to accommodate the proposed development.

The current lease period will expire in August 2017, at which time the lease will be renewed and renegotiated to allow the proposed development. Corporation du Parc de l'Aboiteau Inc. will in turn sub-lease to Camping Plage Aboiteau Beach Inc. for a period of 20 years with the option to renew for 20 years at the end of the period. A tentative occupation & lease agreement, dated June 15, 2015, is enclosed in Appendix F (in French).

### **Description of All Physical Components and Infrastructure**

The Project involves the development of land that is mostly new-growth woods. A total of 238 campsites will be fully serviced with power, water, and sanitary while an additional 35 campsites will only receive water and electricity.

**Buildings & Amenities:** The Campground's primary entrance will be accessed by Allée de la Plage. A parking lot and queuing area will accommodate arriving guests and visitors. The reception area, administration office will be combined with a recreational hall, comfort station (toilets and showers), and laundry services. This building will be located nearest to the site's entrance. The pool area will also be located next to the recreational hall. Two additional comfort stations will serve seasonal and daily campers. A secondary emergency access will be located off of Allée du Parc and is not intended for public vehicular traffic. This emergency access will consist of a tubular barrier gate, equipped with a pad lock and is to remain closed at all time. It is only to be opened in the event of an emergency by the campground staff or emergency personnel.

The Campground will be connected by several footpaths to provide safe and convenient access to public facilities, common areas, and existing trail system.

**Roadways & Campsites:** ROWs will have a reserved width of 7.5 metres (24'-4") to accommodate two-way traffic. Road material will consist of granular material, but may be asphalted in the future.

Standards lots will be 9.0 metres (29'-6") wide, while pull-thru lots will be 8.8 metres (28'-10") wide. The average lot depth will be 18.5 metres (60'-8") with the exception of 19 metre (62'-4") deep lots along the

exterior perimeter of the site. Standard campsites will have a minimum area of 166.5 square metres (1,790 square feet).

RV pads will measure 18.65 metres (59'-2") in length and 4 metres (13'-1") in width at the rear and 5.5 metres (18') at the front to accommodate two parked vehicles. These pads will be finished with the same granular material as the roadways.

Wastewater: The sanitary sewer system will be equipped with an operable stop valve allowing the system to be closed off during any potential storm surge or flooding events. This will prevent surface/sea water from infiltrating into the municipality's sanitary sewer system. All sanitary services will be equipped with a cap allowing it to be shut while not in use or during potential flooding events.

An engineering plan for the proposed sanitary sewer system will be submitted to the Village of Cap-Pelé for approval prior to any connections.

Potable Water System: The potable water system will be equipped with backflow preventers at each water service to protect the Campground's water system from any contamination.

Electrical: Power will be provided from an overhead line coming from the eastern portion of Allée du Parc. Each campsite is to be equipped with a 30 or 50 amp electrical service outlet. Any power source located within the SLR zone is to be placed at a minimum elevation of 4.3 metres (CGVD 28), is to be impermeable, and equipped with ground fault interrupters.

Facilities: All permanent installations or infrastructure within the SLR zone must be located at or above the elevation established in the municipal by-law. In general, only habitable parts of a building, meaning part of a building that has washroom facilities and facilities to prepare and eat food, including a living room and bedrooms must be at a minimum elevation of 4.3 metres (CGVD 28).

In the case of this development, campsites are permitted below this elevation due to the fact that RVs are of mobile and temporary use and are not considered to be buildings. Electrical service outlets at campsites, however, will be weatherproof and installed at 4.3 metres (CGCD28). All of the proposed facilities including comfort stations, recreational hall and rental cottages will meet the minimal elevation level of 4.3 metres (CGCD28).

### **External Lighting**

Buildings, parking areas, entrances and roadways will be illuminated by low-intensity lighting fixtures with shielding to prevent the escaping of light to adjoining properties and to reduce light pollution.

### **Impervious Surfaces**

As previously mentioned, a total of approximately 7.0 hectares (17.2 acres) will be cleared and developed with roadways, RV pads and landscape. The impervious surfaces will consist of building rooftops and RVs, which represent a combined total of approximately 1.5 acres.

### **Setbacks and Buffers**

No work is being proposed within a protected watercourse, wetland, or buffer with the exception of a small portion of utility lines that will cross the 30m PSW buffer along Allée des Chalets east of the site.

A 20 metre natural conservation buffer will be maintained along Allée des Chalets (north of the PDA) in order to provide privacy and screening. The existing walking/biking trail will remain within the proposed buffer. Similarly, a 5 metre buffer will be maintained along the southern boundary (see DWG C-1 in Appendix A).

### **Types of Activities That May Occur as a Result of the Undertaking**

The present potential land-use impacts are limited to the northern boundary where the campground abuts Allée du Parc (see Figure 2). The principal irritants caused by the Campground related activities would be vehicular and pedestrian traffic. These types of activities may cause sound emissions and safety concerns. The cottage area, immediately north of the site, is considered to be the most vulnerable area to such irritants as it is the closest in proximity.

Perhaps the most significant impact to the cottage residents will be the increase in foot traffic resulting from Campground patrons using the right-of-ways to gain access to the existing boardwalk that is located between the cottages. This boardwalk serves as the primary pedestrian corridor between the residential/cottage area and Aboiteau Beach. In order to maintain an acceptable level of privacy for these residents, it is important to direct pedestrian traffic to the boardwalk while minimizing intrusiveness. As such, a pedestrian connection from the Campground will be made as closest to the nearest right-of-way leading to the boardwalk (see Figure 2). In turn, this should also improve pedestrian safety by minimizing the use of Allée des Chalets which does not have a sidewalk and has limited shoulder space.

Additional concerns that may result from daily camping activities are: bonfires, elevated noise levels, safety, cleanliness, etc. The Campground operators will implement rules & restrictions in order to maintain a safe, clean, and healthy environment. The Campground personnel will engage in regularly monitoring these activities to the best of their abilities to ensure an acceptable level of comfort for patrons and neighbours alike. Campground restrictions will include: bonfire control, fireworks restriction, curfews, exterior housekeeping, landscape and maintenance, vehicle speeds, etc.

It is anticipated that this type of development will create an influx in vehicular traffic (cars and RVs). As part of the planning approval process, a TIS Report was completed by GRIFFIN Transportation Group Inc. to assess the vehicular traffic impact to be generated by the proposed Campground and the operational intersection performance of Allée de la Plage and Route 133 (Chemin Acadie) which will serve as a primary access to the site. The study reveals that the subject intersection can adequately accommodate the expected generated traffic, and with the study recommendations, the anticipated traffic volume resulting from the proposed Campground will have an acceptable level of impact on the primary access and intersection of Route 133 / Allée de la Plage. The TIS Report makes several recommendations to accommodate future traffic pattern changes associated with the proposed development which include:

- Consider turning path requirements for truck/RV trailer combination at the intersection of Route 133/Allée de la Plage by widening shoulders following TAC Guidelines;
- Ensure sufficient lane width to safely accommodate two-way traffic along Allée de la Plage;
- Maintain sight triangles across the intersection;

- Review the curvilinear alignment of Allée de la Plage to ensure sufficient sight lines – realign roadway or remove vegetation on the inside of the curve where sight distances are limited;
- That the intersection have one inbound (northbound) lane and one outbound (southbound) lane to accommodate both right and left turning traffic; and
- Install intersection warning signs, intersection signage, and pavement marking.

A complete copy of the TIS Report (draft copy) is included in Appendix D.

## **vii. CONSTRUCTION DETAILS**

### **Duration of Total Construction Period**

The total construction period is estimated to take 16 to 20 weeks and is to be carried out, upon proper approvals, during the construction periods of 2017 and 2018. Some of the construction tasks listed below will overlap.

- Step 1: grubbing & clearing where necessary (3 weeks);
- Step 2: excavation & services installation (8 weeks);
- Step 3: site & road improvements (6 weeks);
- Step 4: campsite landscaping (3 weeks);
- Step 5: foundation for various facilities (2 weeks);
- Step 6: framing and construction of various facilities (4 weeks);

### **Estimated Hours of Construction**

Construction hours will begin at 7:00 am and will end around 7:00 pm / dusk from Monday to Friday and occasionally on Saturdays.

### **Equipment to be Used**

Typical construction equipment used in land development will be used for the Project such as: bulldozers, excavators, loaders, rollers, trucks, and other heavy equipment.

### **Potential Sources of Pollutants During the Construction Period**

Potential impacts on the surrounding environment can be caused by any major soil and vegetation removal which may alter drainage and cause flooding or risk of sedimentation accumulation.

Airborne pollutants such as dust may result from road and site construction during dry periods with high winds. Dust particles may deposit in the nearby wetlands or watercourses and could have an impact on the functionality and quality of the wetlands and stream habitats. Limiting the speed of vehicles should be an effort made to control dust. During dry conditions, watering active roadways should be another measure used to reduce dust. Sweeping and dusting should be done as needed.

Erosion control fences and devices are to be placed where necessary to trap sediment runoff from the site. Inspection should be completed regularly as to insure that ditches are cleared, undamaged, and erosion control devices do not become clogged. A temporary stabilized construction entrance & exit to the site should help reduce the tracking of mud and dirt onto public roads by construction vehicles.

Known hazardous materials that will be used during Construction and Operation & Maintenance include petroleum, oil, lubricants, solvents, and antifreeze. Hazardous materials should be properly stored and in compliance with all appropriate guidelines. These types of spills are typically isolated and can be easily remediated given the proper equipment and training. In the unlikely event of a large contaminant spill, detrimental effects on the environment or adjacent properties could occur, resulting in the loss of quality of wildlife habitat, groundwater, and fish habitat. In such an event, respective authorities will be advised, and proper emergency procedures will be executed to minimize and control the extent of the damage.

### **Access to the Site**

During construction, the Project will be accessed by Allée de la Plage. Most of the work being proposed is located inside of the project limits and should not restrict access to site. Allée de la Plage presently serves les Chalets de l'Aboiteau Cottages, therefore it should only have a limited impact on these residents during the summer season. Allée du Parc may be used as an alternative means of access should Allée de la Plage be closed.

### **Details Concerning the Installation of Infrastructure**

**Buildings:** concrete foundations or steel helical piers will be installed on suitable soils following necessary clearing, and excavation of fill. Unsuitable soils will be excavated and replaced with approved borrow material, placed in layers of specified thickness and compacted to a specified density.

**Roadways & Campsites:** following any necessary grubbing and clearing, the roadway subbase will be prepared by levelling the terrain through excavation or fill materials, along with the installation of culverts and ditches where required, and grading of roadbed. The roadway structure and subbase must provide the proper strength and stability required for the proposed activities. Unsuitable soils will be excavated and replaced with approved borrow material, placed in layers of specified thickness and compacted to a specified density.

**Sanitary Sewer & Water Mains:** 238 campsites will be equipped with both sanitary and water services, and 35 campsites with water only. In addition, most facilities including comfort stations and recreational hall will be fully serviced. These services will be installed underground, below minimum frost cover.

**Electrical Services:** power will be brought to the site from the East and will be distributed to each of the 273 campsites by means of overhead utility lines. Each campsite is to be equipped with 30 or 50 amp electrical service outlets. Any power source located in the flood zone is to be placed at a minimum elevation of 4.3m ASL, and is to be impermeable and equipped with ground fault interrupters.

### **Origin of Required Fill Material (rock fill topsoil, granular material, etc.)**

Any imported materials will come from an approved local borrow source.

## **viii. OPERATION & MAINTENANCE DETAILS**

### **Key Features of the Operation**

Upon completion of the Project, the Operation & Maintenance associated with Aboiteau Campground will be executed by the Proponent. In general, the Campground Operation & Maintenance activities will consist of road & service maintenance, lawn care, landscaping, housekeeping, etc.

The Campground's wastewater collection system will need to be decommissioned and closed in the fall, following each camping season. This is done by flushing the system to eliminate any raw sewage that may have accumulated during the season, ensuring caps are properly fastened to each service connection, and the operable valve is closed. In the event of a flood risk, all sanitary connections located in the flood zone are to be sealed shut.

Similarly, the water supply system will be emptied each fall to prevent pipes to freeze and expand during the winter months. Prior to re-opening, the system must be disinfected by means of shock chlorination. Regular inspection and maintenance of the water supply system and disinfection system are to be carried out while in operation. Backflow preventers should be regularly inspected and maintained.

### **Estimated Daily Water Use and Source**

Water use and source are discussed in the WSSA Initial Application attached in Appendix B. As part of the WSSA, a total of three water wells will be drilled in which two will be used as potable water supplies for the Campground. The WSSA document enclosed herein provides more details regarding water consumption, proposed well locations, etc.

### **Design Capacity of Pumps and Pipelines Conveying the Water**

Each well will be equipped with a variable speed well pump and will be enclosed in a water well shed. This system will provide adequate water pressure for the Campground's intended use. Typical materials such as polyethylene pipe will be utilized.

### **Number of Employees**

It is estimated that there will be between six and eight employees during the operating season. One person will be responsible for regular inspections during the off-season months.

### **Estimated Period of Operation**

The Campground is a seasonal operation, estimated to be open from May 1<sup>st</sup> to October 14<sup>th</sup>. Typically, campgrounds experience a 6 week peak period beginning in July and ending in mid-August.

### **Estimated Lifespan of the Project**

A project of this nature has a relatively long-term lifespan. The Campground is anticipated to remain operational for approximately 30-50 years (subject to a lease renewal).



### **Energy Requirements**

The electrical utility line servicing the site will need to be upgraded in order to meet the additional energy demand associated with the Campground. Conventional power will be brought to the site via new three-phase transmission lines coming from Allée du Parc to the east of the site.

### **Ultimate Fate of All Wastes and Their Handling**

All nonhazardous waste coming from the Campground users and facility operations will be collected in commercial bins. Separate disposal containers will be used to collect plastic and aluminum products to be recycled.

Collection bins are to be located near the facilities at an adequate distance from any building or campsite, easily accessible for users and collection vehicles. These are to be regularly emptied and cleaned in order to reduce any potential odors or unsightliness.

#### **ix. FUTURE MODIFICATIONS, EXTENSIONS, OR ABANDONMENT**

The entirety of the project is set out to be completed in the first phase as described in this report. At the moment, no future modifications, extensions, or abandonment are foreseen.

#### **x. PROJECT RELATED DOCUMENTS**

Project-related documents can be found in the following Appendices:

- Appendix A – Plans and Drawings
- Appendix B – Water Supply Source Assessment Initial Application
- Appendix C – ACCDC Data Report, Plantlist, Habitat Photos, Wetland Delineation Datasheets & Photos, Wetland Functional Analysis
- Appendix D – Traffic Impact Study (Draft Report)
- Appendix E – Rezoning
- Appendix F – Additional Documents

## **3.0 DESCRIPTION OF THE EXISTING ENVIRONMENT**

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### **i. PHYSICAL AND NATURAL FEATURES**

#### **Site Topography**

The topographic information shown on DWG C-2 indicates that the minimum elevation is approximately 2.0 metres ASL near the site's northwestern quadrant and has a maximum elevation of 5.50 metres ASL near the site's southwestern quadrant.

The site slopes moderately to the north towards the existing berm and trail that follows Allée des Chalets towards the west. The berm, trail, and roadway were built 0.5 to 1 metre higher than the existing grade. Gradients vary from 0% to 7%, with an average of approximately 3.5%.

### General Surface Drainage Regime

The site is downstream of a large tributary area that expands southwards up to Route 133 and beyond. The site currently experiences drainage issues due to the fact that the downgradient area of the site is bordered by a trail and berm that acts as a dam. Poor ditching has resulted in water ponding in several areas along the existing trail, and in between the trail and roadway. Presently, the site is drained by two stormwater outlets that direct water north of the site into the large estuary located adjacent to the cottage development (les Chalets de L’Aboiteau), before it is ultimately drained into L’Aboiteau Bay, east of rue L’Aboiteau Street (see Figure 3).

Historically, the water level in the estuary north of the site has reached critical levels during important snowmelt events, which caused the adjacent cottage development to flood. A quick analysis indicates that flooding in this area may potentially be caused by a combination of undersized stormwater outlets downstream and ice build-up.

The same concern is present with the area directly east of Allée de la Plage across from the Project’s proposed entrance. This area may also experience flooding due to undersized culverts, thereby causing potential flood risks to adjacent or upstream properties.

As such, special considerations will be given to stormwater management in order to mitigate flooding risks downstream of the site and to ensure that the proposed development does not further exacerbate the current situation.

Redirecting surface runoff, culvert upgrades, stormwater retention, and proper ditching on the adjacent municipality operated land are some of the measures that have been discussed with the Village of Cap-Pelé.

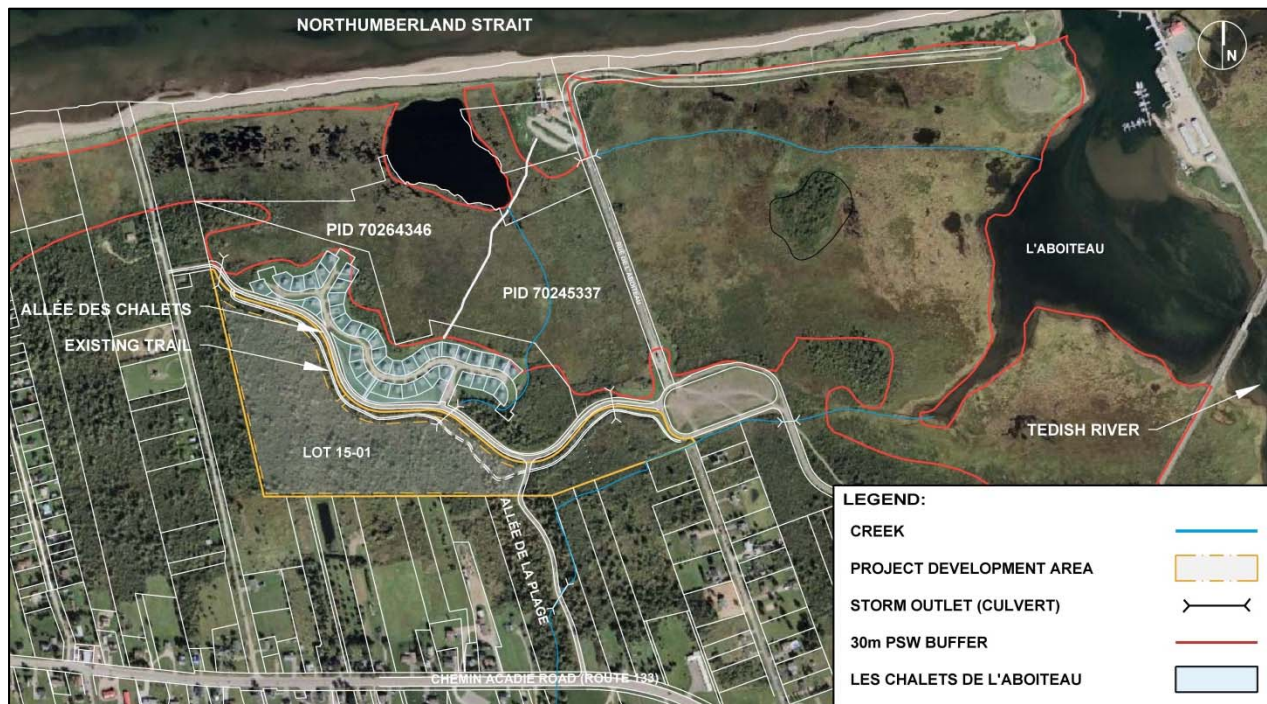


Figure 2 Existing Drainage Regime

### **Site Geology and Hydrology**

The site geology and hydrology for the PDA are discussed in the WSSA attached in Appendix B.

### **Presence of Adverse Environmental Conditions**

There are presently no known adverse environmental conditions located within the PDA. Historically, storm surges are known to have occurred along the seaboard. On January 21, 2000, the coastal area experienced 2.0 m storm surges with the sea level rising to 2.55 m (CGVD28), approximately 2.79 m ASL (Source: *Impacts Of Sea-Level Rise And Climate Change On The Coastal Zone Of Southeastern New Brunswick – 2006*).

### **Watercourses, rivers, streams, drainage ditches, and wetlands**

No mapped watercourses, rivers, streams or wetlands appear within the PDA according to GeoNB. However, drainage ditches are present near the roadway and walking trail. Also, field studies identified wetland habitat to be present in small isolated poorly drained patches in some shrub-dominated areas. No watercourses were identified during fieldwork. A wetland was also identified in the southeast corner of the proposed footprint which consisted of a Forested Wetland dominated by Eastern White Cedar (*Thuja occidentalis*).

Wetland datapoints were compiled at the locations shown in Figure 4. Wetland was identified at points 3, 8 and 9.

All three wetlands are described as problematic and atypical since they are impacted by recent land use such as clearing, ditching and road construction.

Wetland at point 3 is a Shrub Swamp with a soil horizon, which only barely qualifies it as wetland according to the guidelines for hydric soils. The exact size of this wetland is difficult to estimate because of the proximity of numerous nearby upland habitats closely resembling this one at datapoints 2 and 4. Drainage is so flat that it would be difficult to delineate the precise edges of this habitat.

Wetland at point 8 is a Cedar Swamp which straddles a roadway to the south. Cattails and Alders are also present lending some marsh and swamp characteristics. This habitat extends south of the southern boundary of the PID and likely constitutes more than 1 hectare in size. Wetland delineation and functional assessments should be carried out to precisely determine the size and function of this wetland.

Wetland at point 9 is a small and relatively self-contained marsh bordering on the roadway at the north end of the property. It appears to be less than 1 hectare in size.



Figure 3 Wetland Datapoints

**Adjacent watercourses or water bodies that have been classified according to the Water Classification Regulation**

No adjacent watercourses or waterbodies were identified, but substantial coastal wetlands are shown on the map to be indirectly associated with the PDA on the other side of a nearby development to the north.

The Project is located in vicinity of the Northumberland Strait. A portion of PID 70314075 (north of Allée des chalets), in addition to a large portion of PID 70245337 (north of the PDA) is occupied by a PSW. A small unnamed water body is located on PID 70264346, adjacent to the Northumberland Strait. This water body is located within approximately 320 metres of the proposed development area (see Figure 3).

The confluence of the Tedish River and Friel Brook is located approximately one kilometre to the east of the Project area. In addition, the Kouchibouguac River is located approximately 4 kilometres west of the Project area.

**Environmentally Significant Areas as identified by the New Brunswick Nature Trust within 500 m of the subject property**

Parc de l'Aboiteau is located approximately one kilometer to the northeast. It consists primarily of the beach but also of some environmental sites and walking trails.

**The variety, extent, and species composition of the existing vegetation**

The field survey conducted in September of 2016 characterized the site as dominated uniformly by tall shrubs, mostly Alders (*Alnus incana*):

**Table 1 Existing Tree Species**

Acer rubrum	Red Maple	S5
Alnus incana	Speckled Alder	S5
Populus tremuloides	Trembling Aspen	S5
Betula papyrifera	Paper Birch	S5

Also, pockets of semi-mature hardwoods including White Birch (*Betula papyrifera*), Trembling Aspen (*Populus tremuloides*) and Red Maple (*Acer rubrum*) were also present. In the wetland at the southwest corner, Eastern White Cedar also occurs. The full plant list generated during the survey is shown in Appendix C.

The vegetative cover can be described as ‘regenerating’, as it once was an agricultural field, and also supports several exotic herbaceous species such as:

**Table 2 Existing Vegetative Cover**

Phleum pratense	Common Timothy
Ranunculus acris	Common Buttercup
Ranunculus repens	Creeping Buttercup
Solanum dulcamara	Bittersweet Nightshade
Tussilago farfara	Coltsfoot
Valeriana officinalis	Common Valerian
Vicia cracca	Tufted Vetch

No species of conservation concern were identified, nor was any critical habitat or distinct potential observed for such species.

Specific habitat attributes are described by photo-caption below. Habitats are described below according to their location in Figure 5.



**Figure 4 Habitat Photo-caption**

**Table 3 Habitat Photo-caption**

ID	Habitat description
1	Mature White Birch with few graminoids like WL datapoint 2.
2	No graminoids and few trees. Numerous sparsely vegetated depressions like at WL datapoint 2. Sensitive Fern ( <i>Onoclea sensibilis</i> ), Tall White Aster ( <i>Doellingeria umbellata</i> ) and Nightshade ( <i>Solanum dulcamara</i> ) occupy the understory. Speckled Alder dominates the shrub stratum.
3	Larger Trembling Aspen trees.
4	Larger trees again.
5	Larger trees again.
6	Larger trees: American Larch.
7	Red Raspberry ( <i>Rubus idaeus</i> ) dominant in the understory.
8	Upland. No wetland hydrology. Mature White Birch and Trembling Aspen.
9	Edge of upland meadow dominated by Rose ( <i>Rosa virginiana</i> ) and Meadowsweet ( <i>Spiraea alba</i> ).
10	Old field. Upland. Mature Red Maple ( <i>Acer rubrum</i> ) and White Birch.
11	Wetland on either side of trail.
12	Dry Canada Bluejoint ( <i>Calamagrostis canadensis</i> ) meadow.
13	Dry mature Red Maple.
14	Old road running North / South.
15	Marsh at northern property boundary across from nearby residences.

**The variety, extent, and significance of any fish or wildlife populations and/or habitat**

General wildlife in the area are likely typical of rural/urban environments such as this and include such members as White-tailed Deer (*Odocoileus virginianus*), Raccoon (*Procyon lotor*), Skunk (*Mephitis mephitis*), Red Fox (*Vulpes vulpes*), Red Squirrel (*Sciurus vulgaris*), Eastern Chipmunk (*Tamias striatus*), Varying Hare (*Lepus americanus*), Coyote (*Canis volpus*) as well as smaller mammals. No evidence of significant aquatic habitat was observed.

**Known presence of species at risk (legally-listed species) or other species of conservation concern**

**VEGETATION**

No rare plants were observed during the survey and rare plant potential is considered to be low on this site. However, three records were identified by the Atlantic Canada Conservation Data Centre (ACCDC) (Appendix C) as potentially occurring within 5 kilometers of the property:

**Table 4 Potential Rare Plants Within 5 km**

Rumex maritimus	Sea-Side Dock	S3
Puccinellia phryganodes	Creeping Alkali Grass	S2
Hudsonia tomentosa	Woolly Beach-heath	S3

Each of these species are considered coastal species which occur in beach or saltmarsh habitat and are therefore not likely to be found in the study area.

**WILDLIFE**

Numerous species of birds were identified by the ACCDC as having been observed as either breeding, nesting, or migrating near the site. In general, the proposed property may provide either habitat, foraging, roosting or nesting habitat for a variety of migratory or native bird species, some of which are considered rare in the province of New Brunswick.

### *Horned Grebe*

There are no breeding records for Horned Grebe in New Brunswick. This fish-eating species is one of two species of Grebes, the other being Red-necked Grebe, which migrate through the Northumberland Strait in the fall. It is seldom seen in spring, but is more common in September and October and even later. They occur as individuals. It is unlikely that deforestation of small inland wetlands will affect prey availability for this species.

### *Red-necked Grebe*

There are no breeding records for Red-necked Grebe in New Brunswick. This fish eating species is the largest of our three Grebes and occurs regularly as individuals in fall migration in the Northumberland Strait. It is unlikely that destruction of small inland forests or wetlands will affect prey availability for this species.

### *Northern Gannet*

There are no breeding records for Northern Gannet in New Brunswick. The closest this colonial species nests and breeds to New Brunswick is on Bonaventure Island, and in Gaspé, Québec. It is usually seen offshore in New Brunswick waters during spring and fall migration. Both adults and juveniles can be observed at a distance from shore as they dive for fish from spring to late fall. It is unlikely that destruction of small inland forests or wetlands will affect prey availability for this species.

### *Northern Shoveler*

This duck reaches the eastern extent of its breeding range in the Maritimes and is an uncommon, localized breeding species in New Brunswick. It breeds in open, shallow, fresh, brackish and saltwater wetlands. In the fall, large numbers can congregate and be observed in such areas as in local sewage lagoons. It is often the first duck to arrive in migration in spring, as soon as there is open water, and is often the last to leave in early December. Any changes to wetland habitat would affect this species.

### *Gadwall*

This duck breeds on rivers near the coast, with an affinity for rich marsh habitats. It often occurs in artificial impoundments and sewage lagoons. Loss of habitat would affect its continued mounting success as it seems to be increasing in numbers.

### *Lesser Scaup*

Of our two Scaup species, it is considered uncommon and appears as in spring migration in numbers usually scattered along the coast, but especially in fall. There is only one confirmed breeding record in 2008. If seen, it is usually partial to coasts and to rich wetlands including sewage lagoons. Loss of wetland habitat near the coast could potentially affect this species.

### *Common Eider*

There are no breeding records for Common Eider along the Gulf coast or inland. Large flocks of Eider overfly southern New Brunswick in spring and fall migration on their way to and from breeding territories further north. There are a few breeding records here but they are scanty. Confederation Bridge did not seem to be a barrier to their movement through this area, although many flocks travel up and down the Memramcook River as well. There is evidence of some decline.

### *Black Scoter*

There are no breeding records for Black Scoter in New Brunswick. This species is one of the three Scoter species that occur in this region during migrations. It is commonly seen passing by in large flocks as it migrates to and from its northern breeding areas. It is dependent on prey species in the Northumberland Strait when it is forced to spend time on the water here, such as when confronting the bridge on its trip through the Northumberland Strait. Other than occasional sightings of the odd individual bird it is not known to utilize inland habitats.

### *Barrow's Goldeneye - Eastern pop.*

There are no breeding records for this species in New Brunswick. This species is rare to uncommon in the area. If present, it is usually seen occasionally mixed with Common Goldeneye, our usual winter resident, often in the Cocagne area, but could occur scarcely anywhere along the coast. It is not likely to be affected by small inland habitat loss.

### *Red-breasted Merganser*

This abundant common duck is one of our three Merganser species and it can be observed at any time during the year along the coast. It breeds in coastal wetlands and along the beaches, and can be seen in coastal marshes, but seems to avoid freshwater marshes, although some records of it breeding inland do occur.

### *Piping Plover melodus SSP.*

The eastern sub-species *P. charadrius* is of very great concern and is considered endangered. It requires nesting habitat on undisturbed coastal sandy seashores. The International Piping Plover Census shows a 32% decline in the Maritimes between 1991-2011. This species is not likely to be affected by the proposed project.

### *Solitary Sandpiper*

There are no recent breeding records of this species in Southeast New Brunswick. It is uncommon in the area and is usually seen during fall migration utilizing freshwater ponds and wet coniferous forests and marsh edges, wetlands and bogs. Northeastern New Brunswick has a more ideal availability of peatland and wetlands.

### *Willet*

This species breeds in Southeast New Brunswick in coastal marsh grasses although is occasionally found in upland wet areas. This common shorebird occurs along the province's eastern shores and here it is at the northern end of its range. It seems to be increasing in numbers, although there are mixed data that suggest a decline in its expansion. Habitat loss would significantly affect this species.

### *Spotted Sandpiper*

A common inland breeding wetland species, any habitat changes would affect its occurrence. It is also often seen along the shores of rivers and lakes as well as coastlines, or indeed practically any water habitat. Data indicates that there may be some large decline in numbers across the country.



### *Ruddy Turnstone*

There are no breeding records of this species in the Maritimes. It occurs as a migratory shorebird that is commonly seen along the Northumberland shore in fall, but not on the western facing shores of New Brunswick as much. It is seldom seen inland.

### *Sanderling*

There are no breeding records in the Maritimes but it is a common late fall migrant along New Brunswick sea coasts. It moves up and down the seashore beaches, just out of reach of the waves, foraging in the sand. It is not likely to be affected by changes to inland habitats.

### *Semipalmated Sandpiper*

There are no breeding records for this species in the Maritimes, however it is an extremely plentiful late summer and fall migrant arriving in the hundreds of thousands in the Bay of Fundy and Shepody Bay areas, but not as common on the Northumberland side. It feeds voraciously on a small mud shrimp that is available on the low tides and which promote great gains in weight to allow its long distance migration. It is not usually seen inland, except overflying the Chignecto Isthmus.

### *Purple Sandpiper*

There are no breeding records in the Maritimes for this species. It is however an uncommon winter resident and can be found along rocky saltwater shores as far inland as Shepody Bay, although it prefers the open coastlines. This shorebird does not occur inland. It is one of the very few shorebirds which can survive here in winter by eating various crustaceans in the seaweeds it forages for amongst surf and wave action.

### *Wilson's Snipe*

This species is migratory but is also a very common breeder in freshwater wetlands near shrub lands and cultivated fields. During a recent 3 year marsh survey, it was the most common species heard and would be severely affected by any habitat loss inland. It is abundant in numbers, although some decline in the populations in the Maritimes has been indicated.

### *Red-necked Phalarope*

There are no breeding records for Red-necked Phalarope in New Brunswick. This seabird is occasionally found inland as individuals during spring or fall migration, but usually is at sea most of the time with the other Phalarope species. It is not known to breed on the few ponds or lagoons it finds itself on during spring but moves off fairly quickly.

### *Black-headed Gull*

There are no breeding records for this species in the Maritimes. There are few sightings in Southeast New Brunswick. However, it is a winter visitor and migrant on the east coast of the country. It has been suggested that since there are so many sightings of this Old World bird, many in full breeding plumage, it is just a matter of time before it is found to be breeding here. It might be found on marshy lakes inland or on coastal salt marshes so it may be affected by the presence of a campground.

### *Ring-billed Gull*

In spite of its widespread occurrence, confirmed breeding is only reported in seven atlas squares in New Brunswick, while none were reported in the Southeast region. However, the Ring-billed Gull is more of an inland bird than the other gulls and is found in marsh habitats, along coastlines, and amongst human activity. This is our most common summer gull. It tends to disappear during the winter months, and is welcomed back as a sign of spring. The Ring-billed Gull seems to be increasing in numbers, and would be affected by near-coastal development.

### *Common Tern*

Common Terns breed in colonies on islands off the coast, near or in freshwater, and can utilize human structures. Changes in availability of breeding sites and the increase in the number of gulls has resulted in anecdotal reports of lowering populations. In the area under consideration, young and adults Common Tern are often seen in summer foraging along the shoreline, but almost never inland. Estuaries and inlets can also attract them. Any habitat changes that affect their prey species would be detrimental.

### *Bank Swallow*

Bank Swallows are migratory and commonly seen in breeding colonies in sea cliffs, riverbanks and quarries. This is one of our four Swallow species that have seriously declined in recent years like so many other insectivores. Losses of habitat and insect populations have brought devastation. Fall roosting in marshes make this species dependent on vegetation for shelter as well. Any habitat changes would impact negatively, and the loss of more nesting habitat would be extremely unfortunate.

### *Wood Thrush*

There are confirmed breeding records only in three atlas squares in New Brunswick, although other possible sites occurred. A seldom-seen but occasionally heard from forest summer residents, this species breeds occasionally in New Brunswick, but mostly in older hardwoods.

### *Northern Mockingbird*

Several confirmed and probable breeding records occur for this species in Southeast New Brunswick usually on coasts and river valleys. Occasionally, the Northern Mockingbird has also been found during winter, and is mostly associated with human habitation. This species also appears on the Christmas Bird Count lists, and Winter Bird lists. It is a species of open spaces, and it seems to prefer open second-growth areas. Data seems to indicate that numbers of Northern Mockingbird have declined. Its numbers could be affected by the presence of the proposed Project.

### **The presence of potential habitat for species at risk, for sites where there is a reasonable expectation of occurrence of those species**

See sections above.

### **Known presence of critical habitat or other sensitive habitat (e.g. old growth forest)**

Extensive forested wetlands dominated by Eastern White Cedar have been characterized as a PSW in the past due to the presence of rare plants often harboured by this habitat. However, in this case, the

wetlands is not considered extensive, nor were any rare plants identified on the site (or even outside of the site boundary).

**Presence of other environmentally significant areas, including National Wildlife Areas, Migratory Bird Sanctuaries, game reserves, RAMSAR (wetlands of international significance) sites, Important Bird Areas (IBAs), Western Hemisphere Shorebird Reserve Network (WHSRN) sites, and designated critical habitats under the federal Species at Risk Act, etc.**

None.

## ii. CULTURAL FEATURES

The following table enumerates all of the federally, provincially, or locally recognized recreational sites or features located near the Project Development Area.

Table 5 Recognized Sites and Features Located Near the PDA

Managed Area Name	Agency	Distance to Project	Owner	Description
Plage Aboiteau Beach	Village de Cap-Pelé (Municipal)	+/- 1 km	N.B. Dept. of Natural Resources & Energy	Beach
Quai Aboiteau Wharf	L'Autorité portuaire du quai Aboiteau (Municipal)	+/- 3 km	Government of Canada-Attorney General	Wharf

## iii. EXISTING AND HISTORIC LAND USE

### **Property Owners Abutting the Proposed Site**

The following table identifies the properties abutting the PDA:

Table 6 Neighboring Properties Owners Information

PID	Orientation	Owners
70314075	North	
70318373	North	
70318837	North	
70318464	North	
70319645	North	
70318779	North	
70318829	North	
70318811	North	
70318506	North	
70318548	North	
70318555	North	
70318803	North	
70318571	North	
70318597	North	
70318605	North	
70318621	North	
70318647	North	
70318662	North	
70318688	North	

PID	Orientation	Owners
70318704	North	
70318761	North	
70318753	North	
70245337	North & East	
70319595	East	
70319611	East	
70245345	East	
70296504	Southeast	
70252101	Southeast	
70480215	Southeast	
70229273	Southeast	
70229281	Southeast	
70314083	South	
70229984	South	
70545017	South	
70545009	South	
70230008	South	
70230016	South	
70230024	South	
70230065	South	
70230032	South	
70395454	West	

**Description of existing and previous uses of the subject property and adjacent lands**

The site appears to have been used as an agricultural field more than 20 years ago. Figure 6 (Google Earth aerial image - 2012) shows distinct row-patterns in the present-day vegetation indicating row crops were probably present in the past. Also, the flatness of the site suggests this as well.



Figure 5 Evidence of Previous Agricultural Use (2012)

### **Known or Suspected Contamination from Previous Uses**

There are no indications that this site has been contaminated from previous land use.

## **4.0 SUMMARY OF ENVIRONMENTAL IMPACTS**

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Potential impacts on natural features by the construction and operation of the Project pertain mostly to vegetation and wildlife habitat quantity and quality. Impacts caused by any soil or vegetation removal may also alter drainage, cause flooding, or a risk of sedimentation. Other impacts may consist of light, sound emissions, or chemical pollution. A summary of impacts and mitigations is shown in Table 3.

### **Construction**

Known hazardous materials that will be used during both Construction, and Operation & Maintenance include fuels, lubricants, solvents, and antifreeze. It is likely that hazardous materials may be present during the Operation of the Project, and while the possibility is remote, an accident involving the trans-shipment of hazardous materials could result in a spill of this material into the environment. A chemical spill also has the potential to spark a fire that could destroy wildlife or wildlife habitat adjacent to the Project Area.

Construction will result in the permanent loss of a few habitat for some wildlife and bird species, and the creation of edge habitat. The environmental effects of clearing and grubbing are most severe when these activities are conducted during the period when most wildlife and bird species are denning/breeding/nesting (May 1 to August 31). Clearing and grubbing at this time could result in the direct mortality of eggs and unfledged nestlings. The killing of birds or the destruction of their nests, eggs, or young is not compliant with the Migratory Bird Convention Act.

There is the potential for some suitable habitat for Species at Risk (SAR) and Species of Conservation Concern (SCC) to be lost in the Project Area as a result of Project activities.

Should site preparation activities other than clearing (e.g., grubbing and grading) take place during the May to September period, this may also result in the disturbance of some ground-nesting birds, including SAR and SCC.

### **Operation & Maintenance**

Project presence, including campground use and lighting, may result in ongoing disturbance to birds, affecting the quality of habitat adjacent to the Project. Light, noise or air pollutants can degrade adjacent bird habitat. Some birds can become habituated to traffic noise and disturbance after an initial time to adjust. Low amounts of air pollutants are expected, and are not considered likely to affect bird populations. Wind and other weather events will quickly dissipate instances of low air quality.

Habitat quality may be affected by the Operation of the Project through the use of fertilizers or pesticides. Any other waste generated by the campground may also find its way into or near wetland or stream habitats.

Vegetation management will occur within the Project Area. Vegetation management can be viewed as a potential positive or adverse environmental effect. Removing vegetation from the roadsides could remove edge habitat artificially created during Construction in which some birds forage.

## **Accidents, Malfunctions and Unplanned Events**

The potential environmental effects of fire on bird and wildlife habitat could potentially be devastating to a local bird population in the area, such as colonially nesting swallows. A major fire could destroy large amounts of habitat, and some birds may not be able to avoid such an event, including young or nestlings. Fire could originate of sparks from machinery, lightning strikes, or as a result of a hazardous materials spill. Major fires caused during Construction or Operation of a campground are rare.

## **5.0 SUMMARY OF PROPOSED MITIGATION**

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The following sections present recommended mitigation measures which are expected to reduce the adverse effects of the Project on Vegetation and Wildlife. Impacts and mitigation measures are summarized in Table 3 at the end of the section.

### **Construction**

Mitigation measures include respecting the well-marked buffer zone. Standard practices which reduce sedimentation such as silt fencing and hay bales will also be employed. A temporary stabilized construction entrance and exit to the site should help reduce the tracking of mud and dirt onto public roads by construction vehicles.

To mitigate dust, earthwork or earth moving will be reduced during dry periods with high winds. Limiting the speed of vehicles should also be an effort made to control dust. During dry conditions, watering active roadways or work areas should be another measure used to reduce dust. Sweeping and dusting should be done as needed. Further dust control measures include reducing vehicle speeds and re-vegetating of stockpiles, if applicable.

Proper drainage will be maintained throughout the construction period in order to ensure no adverse impacts on neighbouring properties. Ditching improvements, culvert upgrades, redirecting surface water runoff, or water retention may be measures used to ensure adequate drainage. These features will be addressed through design by an engineer.

Clearing should be conducted outside of the breeding period of most migratory birds, to avoid potential direct adverse environmental effects on nesting birds. Clearing should be kept to a minimum, and travel outside of the Project Area should be limited. For safety reasons, some clearing is necessary to improve visibility of wildlife crossing the road. The area cleared should be as narrow as practical to reduce the amount of lost habitat. Mitigation for the protection of SAR is to limit clearing to the minimal amount required for the Project and to conduct clearing outside the breeding season. If nesting birds are observed within the areas where construction is to occur, an appropriate buffer (in consultation with the Canadian Wildlife Service (CWS) and/or NBDNR) should be maintained and observed until the birds have fledged.

### **Operation & Maintenance**

No herbicides should be used to control vegetation growth. Application and timing of fertilizers should also be controlled. Vegetation maintenance activities should be conducted in compliance with the MBCA, which states that no person shall kill, injure, or harass a migratory bird. If nesting birds are observed within the areas where vegetation maintenance occurs, an appropriate buffer should be

maintained and observed until the birds have fledged. No herbicides should be used to control vegetation growth that could potentially have adverse environmental effects on birds.

### **Accidents, Malfunctions and Unplanned Events**

Hazardous materials should be stored properly and in compliance with all appropriate guidelines. The EPP for the Project will contain procedures for dealing with hazardous material spills, and requirements that spill kits are available on-site. In the unlikely event of a larger spill, respective authorities will be advised, and proper emergency responses and procedures will be executed to minimize and control the extent of the damage.

Accidents, including a chemical spill, have the potential to cause a fire that could have an impact on human safety and the environment. In addition to the risk of destroying property, a fire may result in wildlife mortality and loss of wildlife habitat. Construction crews should familiarize themselves with the Fire Contingency Plan provided in the NBDOT Environmental Protection Plan (January 2010). This manual offers guidance to reduce the risk of a fire and to control a fire immediately if one were to occur. In the unlikely event that a fire does occur, local emergency services should have the capability to respond and control the extent of the damage.

The potential for vehicle collisions exists during all phases of Construction of the Project as the movement or manoeuvring of larger vehicles and equipment can cause a potential road hazard. It is anticipated that heavy vehicle traffic will increase as a result of construction related activities. Appropriate road safety signage or traffic control persons should be used when necessary to reduce the risk of vehicle collisions or vehicle-related accidents. Signage should be visible to protect employees and to advise the public that work is being completed on or near the roadway. An advanced signage area should alert vehicle of slow-moving vehicle traffic.

The Work Area Traffic Control Manual prepared by NBDOT provides traffic control information and guidelines for all work carried out on New Brunswick provincial roads. While the majority of the construction will occur outside of a provincial right-of-way, the guide should be consulted if work is to be conducted within or near public roadways.

**Table 3 Summary of Recommended Mitigation Measures**

Summary of Potential Effects	Best Management Practices for Projects	Recommended Mitigation Measures Besides BMP for Construction
<b>Construction</b>		
<ul style="list-style-type: none"> <li>- Loss of Habitat</li> <li>- Change in Habitat Quality</li> <li>- Disturbance to Wildlife &amp; Birds</li> <li>- Direct Mortality of Wildlife and Birds</li> <li>- Sedimentation</li> <li>- Vegetation Removal</li> <li>- Improper Water Drainage</li> <li>- Flooding</li> </ul>	<ul style="list-style-type: none"> <li>- No fueling or storage of petroleum products within 30 metres of the watercourse or wetland</li> <li>- Avoid contact with Wildlife, keep work site clean and free of food waste</li> <li>- Use water as a dust suppressant during dry periods with high winds</li> <li>- Limit excavation and fill and dispose of waste fill off-site</li> <li>- Require storm water management and/or sediment control practices such as silt fences, catch basins and straw bales where necessary</li> </ul>	<ul style="list-style-type: none"> <li>- Avoid work in areas where nesting birds are observed until the birds have fledged</li> <li>- Limit Project related activity outside the Project footprint</li> <li>- Limit the amount of clearing of vegetation and disturbance to that which is necessary</li> <li>- Restrict fueling or storage of petroleum products within 30 metres of any wetlands</li> <li>- Use dust control (water) when necessary</li> <li>- Avoid clearing, grubbing and grading activities during periods of heavy precipitation</li> <li>- Ensure upland buffers are maintained</li> <li>- Re-vegetation of affected areas wherever possible on affected upland areas</li> <li>- Re-vegetation of stockpiles when applicable</li> <li>- Limit Project related activity outside the Project footprint</li> <li>- Reduce vehicle speeds to minimize off-site dust transportation</li> <li>- Rumble strip or gravel pad over filter cloth at construction area entrance/exit</li> <li>- Proper stormwater management, ditching and drainage</li> </ul>
<b>Operation and Maintenance</b>		
<ul style="list-style-type: none"> <li>- Loss of Habitat</li> <li>- Change in Habitat Quality</li> <li>- Disturbance to Wildlife and Birds</li> <li>- Direct Mortality of Wildlife and Birds</li> </ul>	<ul style="list-style-type: none"> <li>- Encourage re-vegetation of affected areas wherever possible</li> <li>- Control timing and application of any fertilizers during any vegetation management</li> <li>- Eliminate the use of pesticides and other contaminants on-site</li> <li>- Provide adequate facilities for waste disposal</li> </ul>	<ul style="list-style-type: none"> <li>- Conduct vegetation management activities in compliance with MBCA</li> <li>- Provide appropriate contaminant storage and handling facilities</li> </ul>
<b>Accidents, Malfunctions and Unplanned Events</b>		
<ul style="list-style-type: none"> <li>- Loss of Habitat</li> <li>- Change in Habitat Quality</li> <li>- Disturbance to Wildlife and Birds</li> <li>- Direct Mortality of Wildlife and Birds</li> <li>- Flooding</li> <li>- Contamination</li> </ul>	<ul style="list-style-type: none"> <li>- Require a spill mitigation plan for all necessary equipment on-site</li> <li>- Provide appropriate contaminant storage and handling facilities (watertight storage)</li> <li>- No fueling or storage of petroleum products within 30 metres of the watercourse or wetland</li> </ul>	<ul style="list-style-type: none"> <li>- Refuelling should be done on flat and suitable surface</li> <li>- Provide appropriate contaminant storage and handling facilities (watertight storage)</li> <li>- Apply Fire Contingency Plan</li> <li>- Implement Emergency Preparedness Plan</li> </ul>



## 6.0 PUBLIC INVOLVEMENT

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### Past Public Involvement Activities

The Project was presented to the public and municipality during the bid proposal and rezoning process. These events served as a platform for dialogue between citizens, stakeholders, and respective governments, and also provided opportunities for questions and comments.

Two objection letters, addressed to the municipality's secretary-clerk, were submitted during this period (included in Appendix E). The issues raised in both letters related to land use, private vs. public involvement, and other matters that are beyond the scope of EIA.

### Proponent Sponsored Public Involvement

In accordance with the NBDELG 2012 "Guide to Environmental Impact Assessment in New Brunswick", the Proponent proposes to engage in the following activities:

- A letter notification, outlining the scope of project and showing a schematic of the development, will be delivered to neighbouring residents, local elected officials, and other stakeholders;
- The Proponent will make a copy of the EIA Registration document (and any subsequent submissions in response to issues raised by the TRC) available for public viewing at the regional DELG Regional Office in Dieppe and Village de Cap-Pelé Municipal Office;

A 25-day period will be given for public comments to be provided to the Proponent. Subsequently, a response report addressing any questions or concerns raised by the public will be completed and published for public consultation.

The Proponent will meet any additional requirements set out by the Project Manager, Environmental Assessment Section, Sustainable Development, Planning, and Impact Evaluation Branch.

## 7.0 APPROVAL OF THE UNDERTAKING

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The following permits and/or approvals have already been obtained:

- Zoning By-law PA-1 amendment to allow camping as a permitted use under terms & conditions (see Appendix E) – Village de Cap-Pelé

Once the EIA review is complete, the following permits will be required in order to proceed with the Undertaking:

- Building permits from the local planning authority;
- DELG Certificate of Approval to Operate will be required for this water system if/when daily water usage exceeds 50 m<sup>3</sup>/day; and
- Watercourse and Wetland Alteration (WAWA) Permit for any work within a wetland, watercourse, or buffer area (if applicable).

## 8.0 FUNDING

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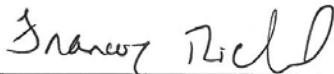
The estimated project cost has not yet been determined; however, funding for the proposed development and associated work inside of the PDA will be provided entirely by the Proponent and its investors.

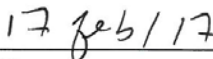
The municipality may provide contributions or be responsible for upgrading any infrastructure outside of the site in order to accommodate the proposed development such as:

- Stormwater management upgrades to ensure proper drainage both upstream and downstream of site (ditching, culvert upgrade, etc.); and
- Roadway/intersection upgrades or modifications of Route 133 and Allée de la Plage as recommended in the Traffic Impact Study (Draft Report).

## 9.0 SIGNATURE

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Mr. François Richard

  
Date