APPENDIX A -

FISHERIES AND OCEANS

CANADIAN ENVIRONMENTAL ASSESSMENT ACT (CEAA) 2012

PROJECT EFFECTS DETERMINATION REPORT

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PROJECT EFFECTS DETERMINATION REPORT

GENERAL INFORMATION

1. Title: Marine Communication and Traffic Services Centre Replacement and Facility Upgrade, Argentia, NL	
2 Proponent: Fisheries and Oceans Canada, Real Properties, Safety and Securities Branch (DFO RPSS)	
3. Other Contacts (Proponent, Consultant, Contractor or another DFO Sector): Public Works and Government Services Canada	**4. Role of each contact:** OGD Consultant
5. Source (Contact): Mark McNeil, Environmental Specialist, Public Services and Procurement Canada	
6. Received Date:	
7. PATH No.:	**8. DFO File No:**
9. Other relevant file numbers:	

BACKGROUND

10. Background about Proposed Development (including a description of the proposed development):

Fisheries and Oceans Canada, Real Property, Safety and Security (DFO-RPSS) Branch, are proposing to replace the Placentia Marine Communications and Traffic Services (MCTS) Centre located in Argentia, NL. The existing structures are dated and are no longer meeting the needs of Canadian Coast Guard (CCG) staff. In addition, a new Conservation & Protection (C&P) office and storage facility will be provided at the same property location as the new MCTS Centre. The existing MCTS Utility building will be re-conditioned and will include a space for the new emergency generator, which is required to support the new MCTS Centre. The main objective is to provide buildings that not only meet the current needs but also the needs for the foreseeable future.

PROJECT REVIEW

11. DFO's rationale for the project review:

Project is on federal land ☒ and;

- ☒ DFO is the proponent
- ☐ DFO to issue *Fisheries Act* Authorization, *Species at Risk Act* Permit or other regulatory permit
- ☐ DFO to provide financial assistance to another party to enable the project to proceed
- ☐ DFO to lease or sell federal land to enable the project to proceed
- ☐ Other

12. Fisheries Act Section(s) and/or Species at Risk Act Sections 73 or 74 (if applicable): N/A

13. Other Authorities: N/A	**14. Other Authorities rationale for involvement:**
15. Other Jurisdiction: N/A	
16. Other Expert Departments Providing Advice N/A	**17. Areas of Interest of Expert Departments:** N/A
18. Other Contacts and Responses: N/A	

19. Scope of Project (details of the project subject to review):

Construction/Installation

The proposed facilities would have a combined footprint of 926.93 m^2, of which the pre-existing Utility Building (Garage and Storage) would account for 142.6 m^2. The construction of the new MCTS facilities would require excavation = > 1.5m deep in order to install the necessary concrete footings.

Foundations from two previously demolished buildings still exist on site. The site contains an existing weather station which can be relocated, if necessary. The site is also crossed by power lines and underground water line servicing the current MCTS Facility. Monitoring wells and small concrete foundations are also present as well as an underground concrete casing for what appears to be a steam pipeline.

The intent is to locate the new buildings so as not to disrupt existing services, including the weather station area, and the overhead power line. The new emergency generator, which will serve the new MCTS building, will be housed in the attached space of the expanded existing Garage and Storage Building. The location of the new buildings on site is predicated on space availability, access, views (as required by MCTS Operations), prevailing winds, site topography, and sun angles. The proposed buildings will be built efficiently and functionally, exploiting the site location, existing topography and will attain the CaGBC's LEED® Silver Certification. The location and orientation of the parking lots, driveways, and other features, will be arranged to exploit the site's existing natural features.

An additional storm drain line to the nearby shoreline may be required. If it is possible to utilize an underground storm sewer for discharge, then opportunities will exist to provide stormwater quality and quantity control associated with the LEED initiatives.

Localized grading will be required at the building perimeters to ensure positive drainage and appropriate grades at access points. All grading will be such that positive drainage to either a catch-basin system or open ditch system is achieved.

The current MCTS facility is serviced by an on-site septic system consisting of a 3000L septic tank, distribution box and a disposal field consisting of five (5) absorption trenches, 15.0 m long consisting of 100 mm perforated pipes. It is felt that the design capacity and estimated flows are sufficiently close to not warrant any changes.

The current MCTS facility is serviced by a water lateral from Placentia Pike. It is expected the main is of sufficient diameter to supply the demand the previous site requirements and that water supply (volume and pressure) will not be an issue. Each new building will be serviced independently from the existing main in Placentia Pike. Water supply lines will be installed with appropriate cover depth to prevent freezing. Each line will be provided with isolation valving and appropriate backflow prevention devices. Design shall consider adequate joint restraints and shall consider corrosion protection of all metal pipe and appurtenances.

Operation

The Environmental Management System (EMS) with an integrated Environmental Management Plan (EMP) for the MCTS structure will cover operational aspects of environmental management and mitigation measures for the environmentally responsible aspects of building operation (fuelling, waste disposal, activities on the property and water).

Decommissioning

It is assumed the existing MCTS will not be repurposed but will be demolished following the successful completion of the new facilities. At the time of decommissioning/demolition, DFO will develop a site-specific re-use or reclamation plan that is appropriate for the applicable environmental legislation and Fisheries and Oceans Canada policies.

Scheduling

Subject to approval and funding, the proposed project will likely be carried during the 2017-2018 fiscal year

20. Location of Project:

Argentia is located within the municipal boundaries of the Town of Placentia. The project site can be accessed via Route 100S from the TCH. Merge onto Charter Ave, then left onto Placentia Pike into Argentia.

21. Environment Description:

Physical Environment:

Argentia is a commercial seaport and industrial area on the southwest coast of the Avalon Peninsula and defined by a triangular shaped headland which reaches northward out into Placentia Bay creating a natural harbour 3 kilometres in

length. Formerly the site of a US Naval Base, Argentia is being redeveloped with a diverse group of port users and tenants involved in marine transportation, manufacturing, information technology, construction, offshore oil, mining and other sectors.

The project site is located within the Maritime Barrens Ecoregion. This ecoregion spans the majority of the southern coast of Newfoundland and is characterized by the coldest summers with frequent fog and strong winds. Winters are relatively mild with intermittent snow cover particularly near the coastline. Annual precipitation exceeds 1,250 mm. The landscape pattern consists of usually stunted, almost pure stands of Balsam Fir, broken by extensive open heathland. Good forest growth is localized on long slopes of a few protected valleys.

The site selected for this project lies within parcel 99-8 on the former United States Naval and Air Force Base at the Port of Placentia. The parcel has a total area of 4.147ha and contains several buildings housing the current Placentia MCTS. The site for this project is a grassed, brownfield site, bounded by paved roadways. The site is relatively flat and slopes slightly from east to west. Conditions at the site location are described as 200mm layer of topsoil, underlain by sand to a depth of 2.18m (Brown Sand with some gravel, pebbles and cobbles). The soil is described as dry at the surface with increasing water content with depth, until water is present at approximately 2.1m below existing grade. The site was previously home to two buildings parallel to Placentia Pike and setback approximately 9m from the edge of roadway. These buildings have been demolished, but foundations still exist in these areas. The site is also crossed by power lines and underground water line servicing the current MCTS facility, and contains an existing weather station. Monitoring wells and small concrete foundations are also present.

Species at Risk (Aquatic and Terrestrial)

A search of the Atlantic Canada Conservation Data Centre (AC CDC) database was conducted; this produced a list of rare / unique species (i.e., plants and animals) as defined by the ACCDC within a 5 km buffer zone (standard ACCDC procedure) of the site of the proposed work. All species were cross-referenced with Schedule 1 of the *Species At Risk Act* (SARA) and the following species were reported: Harlequin Duck (*Histrionicus histrionicus) and* Short Eared Owl (*Asio flammeus)*. However, given the small spatial and temporal scale of the project and the developed nature of the area, it is unlikely that the project site provides any critical or limiting habitat for the abovenoted species at risk.

22. Scope of Effects Considered (section 5(1) and 5(2)):

Table 1: Potential Project / Environmental Interaction Matrix

	As per Section 5(1)			Section 5(1)c Aboriginal Interest				Section 5(2)			Due Diligence			
Project Phase / Physical Work/Activity	*Fish (Fisheries Act)*	*Aquatic Species (SARA)*	*Birds (MBCA)*	*Health and Socio economic*	*Physical and cultural heritage*	*Land use*	**HAPA Significance*	*Health and Socio economic*	*Physical and cultural heritage*	**HAPA Significance*	*Water (ground, surfaces, drainage, etc.)*	*Terrestrial / Aquatic Species*	*Soil*	*Air Quality*
Construction/Installation														
Disturbance of Contaminated Soil	P	-	-	-	-	-	-	P	-	-	P	P	P	P
Presence of Structure	-	-	P	-	-	-	-	P	-	-	P	P	P	P
Operation / Maintenance	P	-	P	-	-	-	-	-	-	-	P	P	-	-
Decommissioning	P	-	-	-	-	-	-	P	-	-	P	P	P	P

**structure, site or thing that is of historical, archaeological, paleontological, or architectural significance.*

Legend: P = Potential Effect of Project on Environment; '-' = No Interaction

23. Environmental Effects:

Potential Project/Environment Interactions and their effects are outlined below:

Fish:

- Any contaminated runoff could negatively impact fish and quality of potential fish habitat.
- Sedimentation as a result of construction activities may negatively impact fish and potential fish habitat

Water:

- Construction related contaminants may be deposited in water body via storm drains and overland flow, decreasing marine water quality near project site.
- Construction related refuse may be deposited in water-body, decreasing marine water quality.
- Sedimentation as a result of construction activities may decrease marine water quality near project site.
- Construction related contaminants may leach into groundwater, negatively affecting ground water quality.

Health:

- Potential for safety hazards to workers and site users during construction activities.

Aquatic species:

- Sedimentation as a result of construction activities may negatively impact aquatic species present in close proximity to project site.
- Any contaminated runoff could negatively impact aquatic species present in close proximity to the site.

Birds:

- Birds risk of collision with buildings and structures.
- Lights from construction, buildings and structures could affect avian navigation.

Soil:

- Exposed soils may erode.
- Soil at risk of contamination from construction related contamination, spills and leaks.
- Contaminated soil from site could contaminate other sites if removed and not disposed of appropriately.

Air quality:

- Construction activities may result in nuisance impacts due to noise and dust.

24. Mitigation Measures for Project (including Habitat Compensation if applicable):

- If possible schedule work to avoid wet, windy and rainy periods that may increase erosion and sedimentation.
- The proposed activities must be carried out in such a manner that sediment, and/or other construction related materials do not enter the watercourse.
- All vehicles, machinery and equipment must be in good repair to avoid leaks or spills of any kind.
- Oil spill response equipment, such as absorbents and open-ended barrels should be available on-site in case of a spill or leak. All spills or leaks should be promptly contained, cleaned up and reported to the 24-hour environmental emergencies report system (1-800-563-2444);
- Appropriate measures should be taken with regards to containment when storing fuel, oil or other contaminants to ensure there is no risk of deleterious substances entering the environment.
- Remove all construction materials from site upon project completion.
- Any hazardous materials produced as a result of this project are to be transported off-site for disposal/treatment at an approved waste handling facility, pursuant to applicable provincial and federal regulations/legislation;
- Measures should be taken to avoid instances of ponding water.
- The presence of the following contaminants/hazardous materials has been found on site: Asbestos Containing Materials (ACMs), lead-acid batteries, mercury containing thermostats and light tubes, potential ozone depleting substances, paint containing lead and mercury concentrations exceeding applicable guidelines inside the building, potential lead-containing pipes inside the building, and lead and copper impacted soils (above CCME Commercial Soil Quality Guidelines (SQG's)) along the west and north sides of the MCTS building and west and west sides of the garage. Appropriate environmental and health and safety precautions should be taken whenever workers may come into contact with potentially hazardous materials. Disposal of contaminants and/or hazardous materials must be completed in accordance with applicable federal/provincial and municipal regulations.
- Proper safety procedures must be followed during the duration of the project as per applicable municipal, provincial, and federal regulations.
- Ground water on site has elevated reportable detection limits (RDL's) that exceeded the Tier I FIGQG for 8 metals. By applying a 10-fold dilution factor, all groundwater metal concentrations are at or near the Tier I criteria therefore the metal exceedances identified in groundwater do not pose an unacceptable risk to human or ecological receptors. Due care and discretion should be exercised regardless when working with contaminated ground water and soil.
- Extreme care should be exercised when operating vehicles or machinery around or nearby above-ground fuel tanks.
- If underground steam pipeline is removed during construction, pipe material and insulation should be handled and disposed of accordingly.
- Due to the presence of contaminants in groundwater any removed soil should be considered contaminated and disposed of appropriately.
- Lights inside facilities should be turned off when not in use to avoid any negative effects to avian navigation.

25. Significance of Adverse Environmental Effects:

With the application of mitigation measures, significant adverse environmental effects are unlikely.

26. Monitoring and Compliance Requirements under *Species at Risk Act*:

n/a

CONCLUSION

27. Conclusion on Significance of Adverse Environmental Effects:

28. Prepared by: Sikumiut Environmental Management Ltd. **29. Date:** March 16, 2017

30. Name: Grant Vivian

31. Title: Vice President, Operations

32. Recommended by: _____ **33. Date:** March 29, 2017

34. Name: Mark McNeil

35. Title: Environmental Specialist, PWGSC

DECISION

36. Decision Taken

☒ The project is not likely to cause significant adverse environmental effects, and DFO may exercise its power, duty or function.

☐ The project is likely to cause significant adverse environmental effects, and DFO has decided not to exercise its power, duty or function.

☐ The project is likely to cause significant adverse environmental effects, and DFO will ask the Governor in Council to determine if the significant adverse environmental effects are justified in the circumstances

37. Approved by: _____ **38. Date:** _____

39. Name:

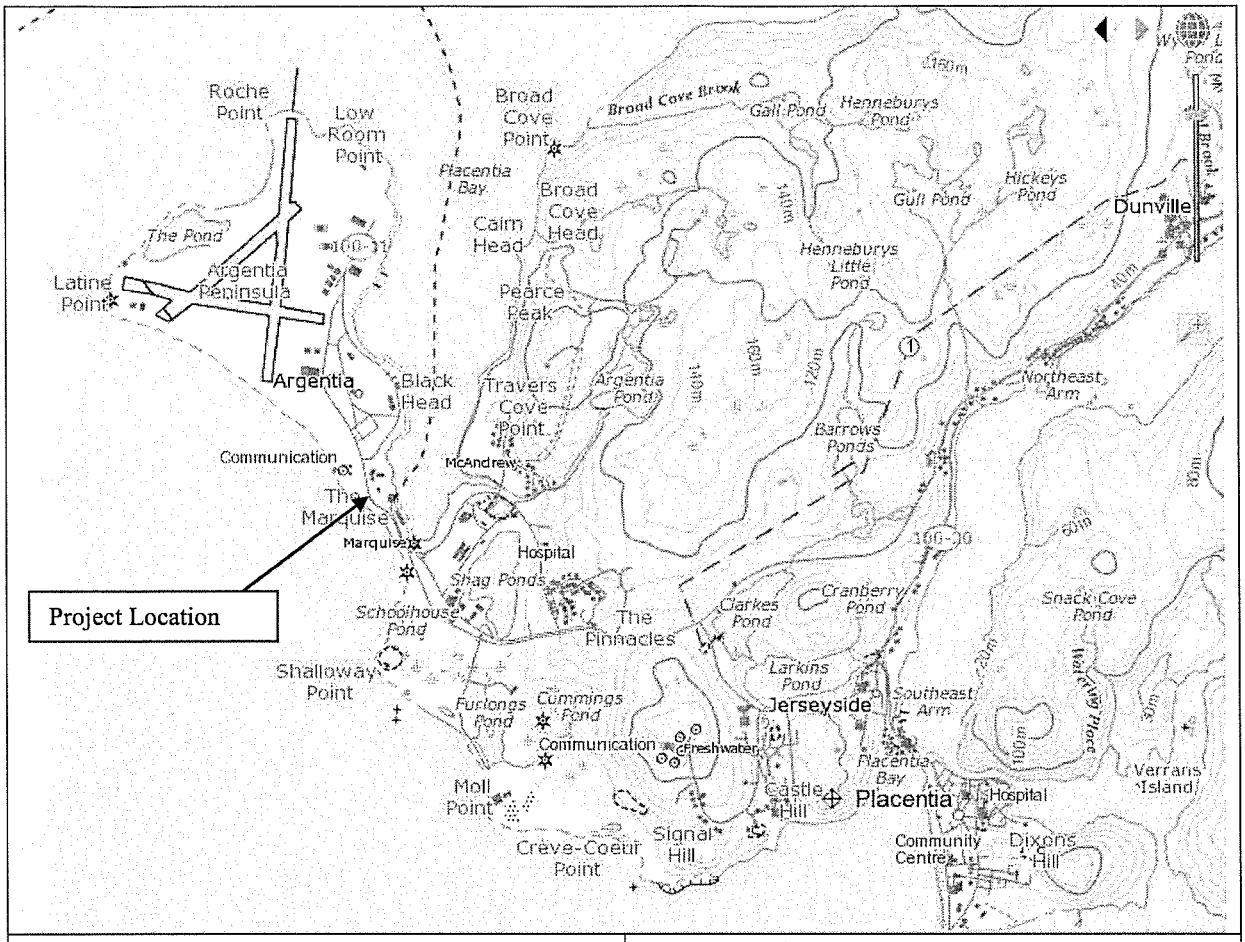
40. Title:

41. References:

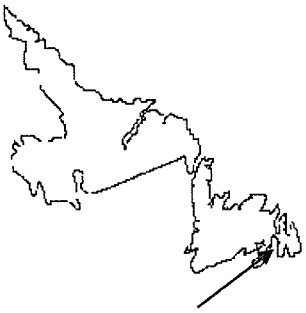
APPENDICES

Appendix A – Topographic Map
Appendix B – Site Plan

Appendix A
Topographic Map, Aerial and Site Photos

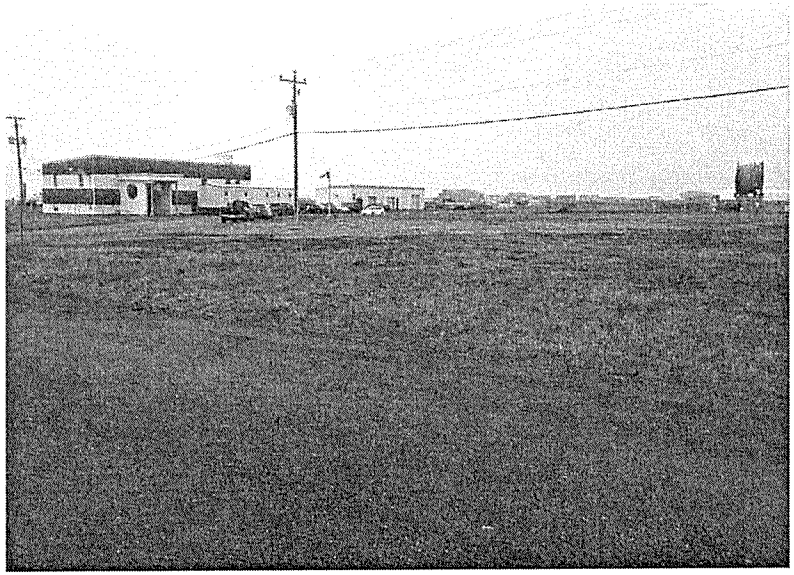


Appendix A-1
Topographic Map of Proposed Project Location, Argentia, NL.

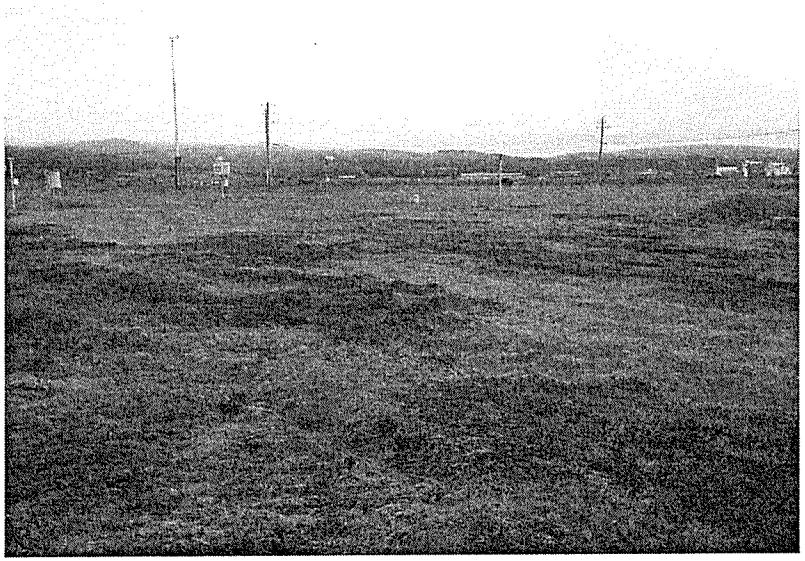


Appendix A-2. Argentia, NL (site in red).

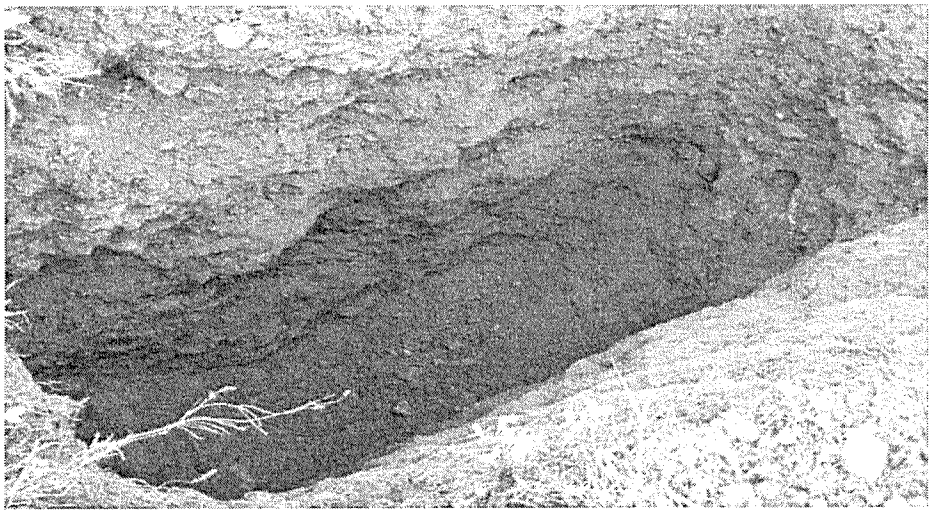
Appendix A-3 Aerial of project site and existing MCTS facilities (project site and facilities in red).



Appendix A-4 Standing near the Southern corner of the Site looking North towards Subject Site (grassy area) and MCTC buildings



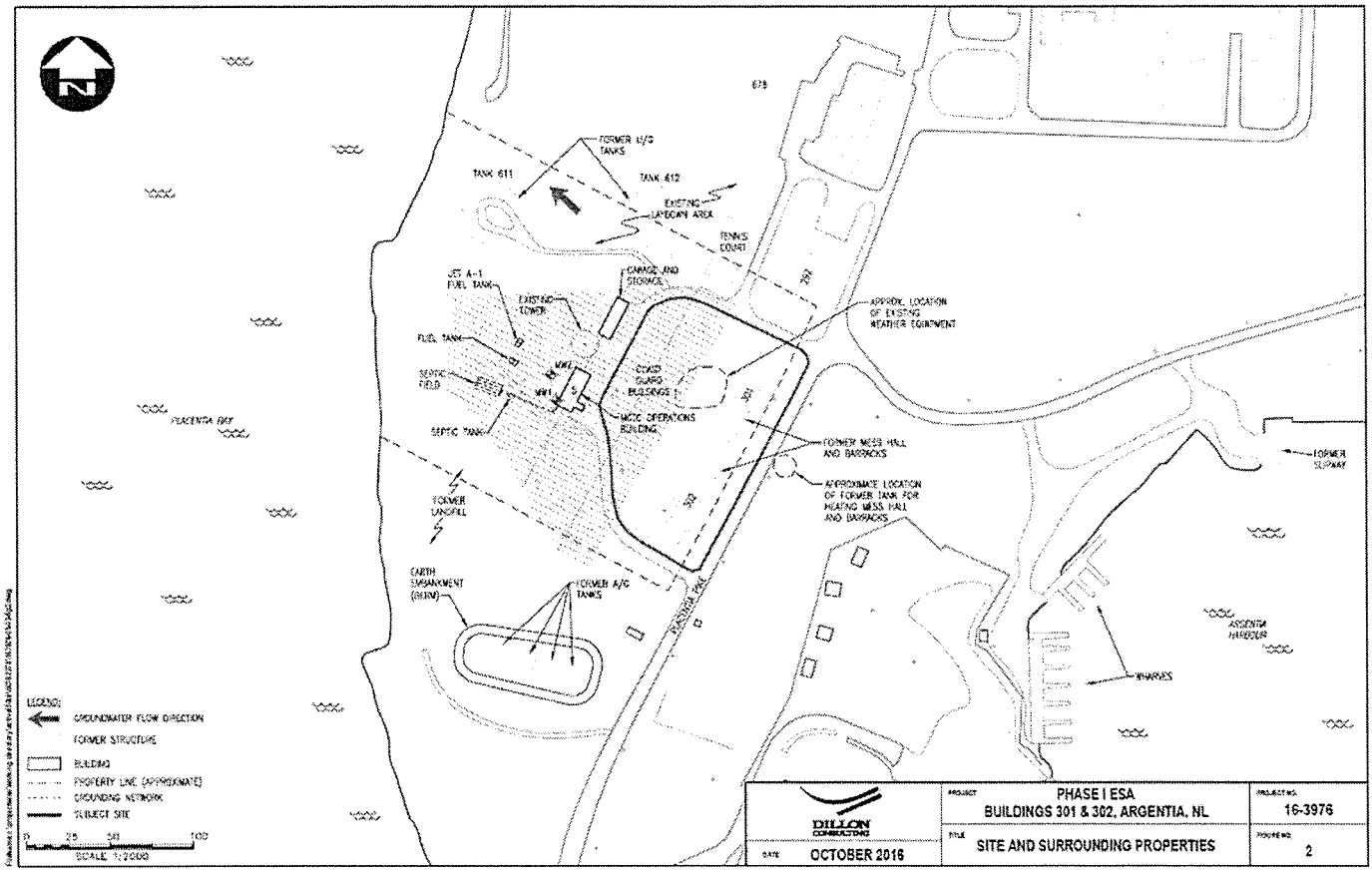
Appendix A-5
Environment Canada weather sensing equipment near the centre of the Subject Site



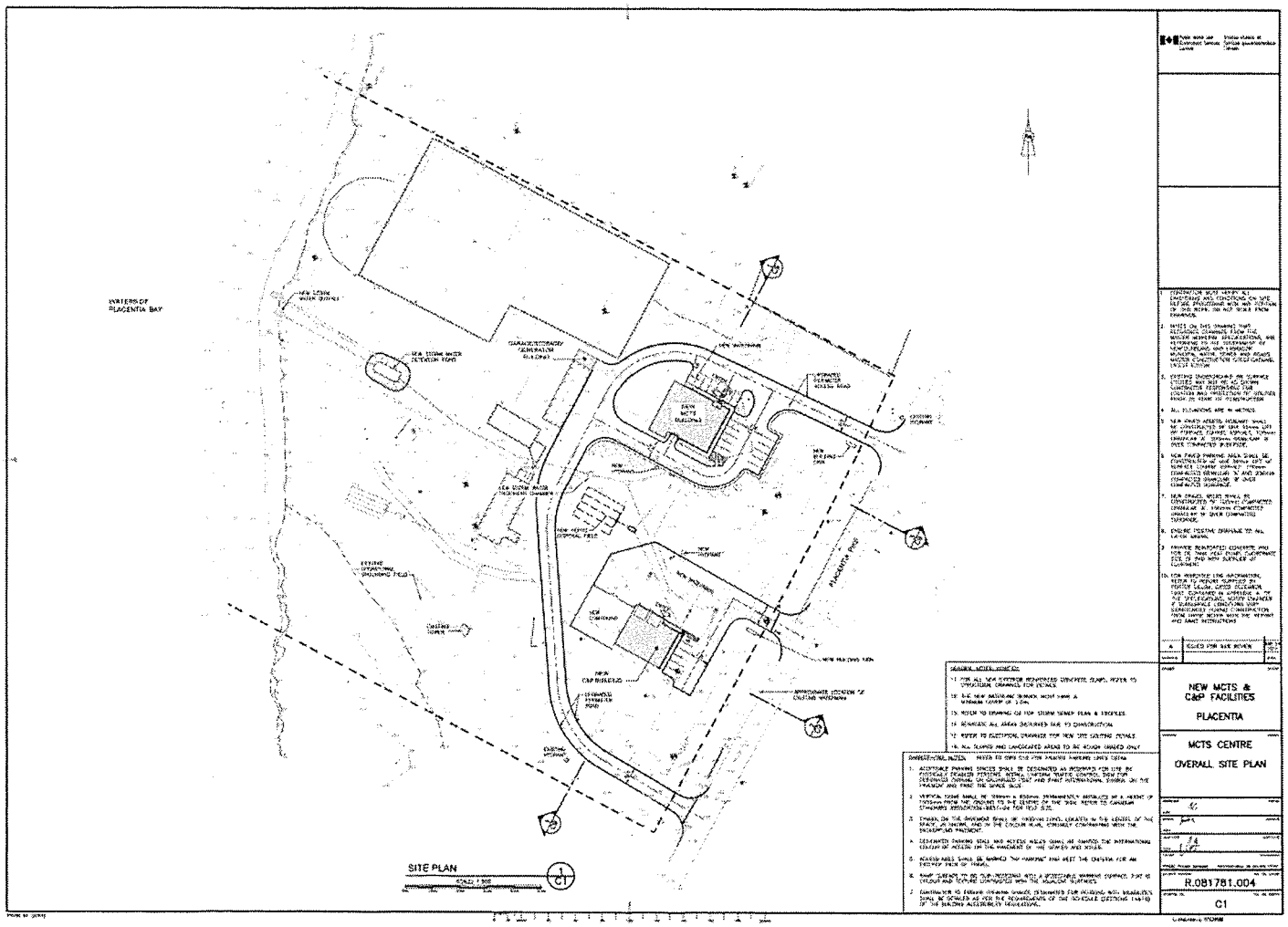
Appendix A-6 Lithology observed of site. Surface unit consisting of brown sand with some gravel, pebbles, and cobbles throughout is visible at the top portion of the photograph.

Appendix A-7 Extent of concrete steam line casing located between the former building foundations.

Appendix B
Site and Schematics of Proposed Project



Appendix B-1: Site and surrounding properties and infrastructure (proposed site for project in red).



Appendix B-2: Proposed layout of project site.