

**Niagara District Airport**  
**Terms of Reference**  
**Phase I & II Environmental Site Assessment**

**A. BACKGROUND**

The Niagara District Airport (NDA) is a municipal airport located within the Town of Niagara-on-the-Lake boundaries (Figure 1).

The NDA is situated on 130 ha (322 acres) of land. The existing NDA property is comprised of one 1,524 m runway (Runway 06-24), two smaller runways (Runway 11-29 and Runway 01-19), Taxiways Alpha/Bravo/Charlie/Delta, a terminal apron, terminal building, various aircraft hangers and parking facilities. The NDA has NAV CANADA on site, Avgas and Jet Fuel refuelling capacity, and on-site services include, executive and personal charter, helicopter and fixed wing sightseeing, flight training schools and several interesting vintage aircraft. The remainder of the NDA land is mainly vegetated with grasses, with minimal cultural meadow and thicket habitats. The vegetated area is regularly mowed and maintained as part of the standard airport operations.

The surrounding land use is primarily agricultural with vineyards comprising the majority of crops, and corn/wheat, and some animal husbandry farms (pastures) making the remainder (Figure 5.2). The area surrounding the NDA is situated within the Greenbelt Plan Area and is classified as Good Tender Fruit and Good Grapes Land. Subsequently, the area falls under the jurisdiction of the *Greenbelt Act* (2005).

The NDA is an important resource for the Niagara Region and is essential in promoting new and continuing business by providing shipping and corporate landing facilities. The airport serves as a point of call for general aviation and air operators offering charter passenger service, and services both private and commercial helicopter and fixed-wing aircraft operators located on site. The Niagara Region is potentially initiating negotiations with the current funding partners of the NDA to transition responsibility to Niagara Region subject to a Phase I and II Environmental Site Assessment (ESAs).

**B. GOAL**

The purpose of this assignment is to undertake a Phase I and II Environmental Site Assessment including ground monitoring program at the Niagara District Airport.

The Phase I and II ESAs including groundwater monitoring are for due diligence purposes. There is no plan to change the land use at the NDA.

**C. ENVIRONMENTAL SITE ASSESSMENT**

**1.0 PHASE I ENVIRONMENTAL SITE ASSESSMENT**

A Phase I ESA to assess if current and/or former activities/operations at the NDA and/or adjacent properties have adversely affected the site from an environmental perspective.

The Phase I ESA is to be completed in accordance with the *Canadian Standards Association (CSA) Standard Z768-01 Phase I Environmental Site Assessment*. The Phase I ESA will, but not be limited to, the following tasks:

- I.1 Project initiation and communications including Site visit(s).
- I.2 Review of background and historical information including a review of relevant studies/reports previously completed.

The review will also include but not be limited to the following items:

- Aerial photographs of the Site and surrounding areas
  - Local topographic and drainage maps.
  - Ministry of the Environment and Climate Change (MOECC) well records.
  - Geological and hydrogeological mapping available for the area.
  - Town directories and other information sources to assess past and present occupants of the Site and surrounding areas.
  - Fire insurance plans, if any.
  - Registries with respect to underground storage tanks, waste disposal sites, waste generator information for the Site and surrounding areas.
  - Information regarding Municipal and Provincial compliance issues on the Site and surrounding areas. This will include a search of the Ministry of the Environment and Climate Change Brownfields Site Registry.
  - Any internal documentation available from the NDA regarding Site history and Site operations.
- I.3 Site Inspection including cursory evaluation of adjacent properties.
  - I.4 Interviews with staff, tenants, operators and any person(s) with knowledge of the history at the Site and surrounding areas.
  - I.5 Report preparation.

## **2.0 PHASE II ENVIRONMENTAL SITE ASSESSMENT**

Notwithstanding the results of the Phase I ESA given the current site use a Phase II ESA is expected.

The Phase II ESA will be completed using the *Canadian Standards Association (CSA) Standard Z769-00 Phase II Environmental Site Assessment*. The Phase II ESA will include but not be limited to the following components:

- 2.1 Locate private and public utilities.
- 2.2 Advance a minimum of seven (7) boreholes on the Site, as follows:
  - Five (5) boreholes to 6.0 mbgs and instrumented with groundwater monitoring wells, screened between 3.0 and 6.0 mbgs
  - Two (2) boreholes to 6.0 mbgs for additional site coverage

The qualified consultant shall ensure that the locations chosen are representative of the existing Site.

- 2.3 Collect soil samples at regular intervals;

- 2.4 Complete field logs for each borehole/sample including descriptions of soil colour, texture, consistency, structure and moisture content (based on the Unified Soil Classification System), odour and any signs of impacts.
- 2.5 Measure total organic vapour (TOV) concentrations as a preliminary screening method for volatile compounds; representative samples collected shall be submitted for environmental soil/fill testing for possible contaminants (including but not limited to metals and inorganics, hydrides, free cyanide, mercury, pH, conductivity and sodium absorption rate, organochlorine pesticides) in accordance with Ontario's "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" (April 15, 2011). In the event that petroleum contamination is suspected, the consultant shall conduct laboratory testing to determine levels of BTEX, TPH, and tetraethyl lead in order to assess the site sensitivity based on the criteria set forth in the above-mentioned regulation.
- 2.6 Develop monitoring wells and measure and record pH, conductivity, and temperature to ensure that representative groundwater is being drawn from the well prior to collection of groundwater samples;
- 2.7 Collect groundwater samples from the monitoring wells; representative samples collected shall be submitted for environmental testing (chemical analysis) for metals and inorganics, and organochlorine pesticides per above noted standards.
- 2.8 Survey all boreholes and monitoring wells relative to a local and recoverable benchmark; all borehole/well locations must be properly reference. A location plan showing the borehole/well location shall also be prepared from the base plan supplied by the NDA.
- 2.9 Soil and groundwater samples will be collected, stored, and transported under chain of custody. Sample identification, project number and date shall be recorded on all sample containers.
- 2.10 Ensure adequate quality assurance/quality control (QA/QC) programs are implemented for soil and groundwater sample collection;
- 2.11 Evaluate and tabulate all chemical analysis data and compare to the applicable Site Condition Standards (SCSs) presented in the April 2011 "MOE Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act"; and
- 2.12 Compile and review all data and prepare a Phase II ESA report which will include borehole logs, chemical analysis data, discussion, conclusions, and recommendations.

All soil and groundwater sampling shall be carried out in accordance with current Industry Practice. The chemical analyses must be conducted by an analytical laboratory that is a member of the Canadian Association for Laboratory Accreditation (CALA).

All unexpected conditions that warrant a modification to proposed work plan shall be communicated to the NDA prior to implementation.

### **3.0 GENERAL**

**NDA will provide the successful consultant with the following:**

- 3.1 All available plans, bridge inspection reports, field notes and construction information, traffic data, and pavement condition surveys or studies;

- 3.2 Legal surveys and property information and property negotiation services;
- 3.3 Tender document distribution and formal tender opening.

#### **4.0 CONSULTANT SUBMISSION**

The consultant is requested to propose a work plan, which is comprehensive in addressing the tasks outlined in this Terms of Reference. The proposal should include items that are warranted, based on the requirements outlined herein, and others that may not be necessarily noted.

#### **5.0 CONSULTANT SUBMISSION**

The consultant shall provide a clear outline, including the following general items, in a brief letter of proposal to undertake this assignment:

- 5.1 A detailed work plan and a project schedule, which will identify all major components of this assignment and its anticipated start and completion dates.
- 5.2 A description of the consultant's related experience and available insurance coverage. A copy of Certificate of Authorization is to be provided upon request.
- 5.3 A description of the consulting team, the lead person and the relevant experience and qualification of each individual, along with an allocation of percentage time each will dedicate to this project within the scheduled time frame.
- 5.4 Identification of all sub-consultants, their qualifications and experience, as well as their specific role in the project.
- 5.5 Disclosure of any perceived conflict of interest.
- 5.6 Items/effort expected to be provided by NDA Commission/staff.
- 5.7 Four (4) copies of proposal.

#### **6.0 COST AND MAN HOUR ESTIMATE**

Provide the overall project costs broken down in the following manner:

- 6.1 A time and cost breakdown of each major activity identified in the proposal. In addition to the breakdown of activity, the consultant will also provide costs for sub-consultants, if any. It should be assumed that the total cost will be an upset limit, based on the work plan, as outlined.
- 6.2 Fee schedule, hourly rates, for each consultant staff and sub-consultants of the project team, and disbursement costs.
- 6.3 The proposal budget shall include all fees, disbursement and taxes for prime and subcontracted consultants.

The following items are general obligations of the consultant and NDA:

1. Submission of a proposal does not obligate NDA to acceptance and, as such, NDA reserves the right to accept or reject any proposal.
2. Acceptance of any proposal will be subject to approval by the Niagara District Airport Commission.
3. The selected consultant will be required to enter into a written agreement, in the form of the attached Standard Engineering Agreement without alterations.

