



CITY OF IQALUIT

# **Environmental Management Plan (Revised Final)**

**Landfill and Waste Transfer Station**

# Table of Contents

|            |   |           |
|------------|---|-----------|
| <b>1.0</b> | <b>Introduction</b>   | <b>1</b>  |
| 1.1        | Background .....  | 1         |
| 1.2        | Site Description .....  | 1         |
| 1.3        | Purpose of the Environmental Management Plan.....   | 2         |
| <b>2.0</b> | <b>Project Personnel, Roles and Responsibilities</b>  | <b>7</b>  |
| 2.1        | Owner – City of Iqaluit .....   | 7         |
| 2.2        | Construction Phase Owner’s Representative – Dillon Consulting Limited .....                       | 7         |
| 2.3        | Construction Phase Contractor’s Site Supervisor .....   | 8         |
| 2.4        | Contact Information.....  | 8         |
| 2.5        | Documentation Procedures .....  | 8         |
| <b>3.0</b> | <b>Regulatory Requirements</b>  | <b>9</b>  |
| 3.1        | Federal Legislation .....   | 9         |
| 3.2        | Territorial Legislation .....   | 9         |
| 3.3        | Municipal Legislation .....   | 10        |
| 3.4        | Permits and Approvals .....   | 10        |
| <b>4.0</b> | <b>Environmental Protection Plans</b>   | <b>11</b> |
| 4.1        | Construction Phase Outline .....  | 11        |
| 4.2        | Operations, Closure and Post Closure Phase Outline .....  | 11        |
| <b>5.0</b> | <b>Emergency Response Plan</b>  | <b>13</b> |
|            | <b>Figures</b>  |           |
|            | Figure 1-1: Site Locations .....  | 3         |
|            | Figure 1-2: Waste Transfer Station Layout Plan.....   | 4         |
|            | Figure 1-3: Landfill Layout Plan .....  | 5         |
|            | <b>Appendices</b>   |           |
| A          | Project Contacts List   |           |
| B          | Environmental Protection Plan – Construction Phase (under separate cover)                         |           |
| C          | Environmental Protection Plan – Operations, Closure and Post-Closure Phase (under separate cover) |           |
| D          | Emergency Response Plan (under separate cover)  |           |

## 1.0 Introduction

### 1.1 Background

The City of Iqaluit (City) is in the process of implementing its Solid Waste Management Strategy to service their near and long term (75 years) municipal solid waste disposal requirements. Founded on a previously-completed conceptual design and facility siting exercise, key elements of the project include a solid waste transfer station (WTS) within the immediate urban area of the City where residential and commercial waste will be hauled to, processed, and compacted in bales or in the case of waste wood and cardboard, shredded for use as a fuel source for an on-site biomass boiler. Tires, metal and select construction and demolition (C&D) wastes will also be shredded and or baled for landfilling or transported south for recycling. The resulting solid waste bales and possibly a smaller amount of unbaled construction and demolition waste will be trucked to an engineered balefill landfill site located approximately six kilometres from the WTS. The vehicles transferring the waste bales will access the road leading to the landfill site from the waste transfer station to avoid having the transfer vehicle travel through the City.

Other planned features of the WTS include a public drop off area for Household Hazardous Wastes (HHW) and a vehicle logger/compactor unit; in both instances allowing for the preparation of waste materials prior to shipping to approved management facilities in the south.

The access road that will be used to reach the new landfill site has been designed by EXP Services Inc. who will also be providing Construction Contract Administration services for the construction of the road. It is anticipated that the construction of the road will be included in the new landfill and waste transfer station contractor's scope of work.

To address their objectives, and following a competitive proposal process, the City engaged Dillon Consulting Limited (Dillon) to provide design and construction contract administration services to support the establishment of the transfer station/baling facility and the engineered landfill site. The engineered landfill will be designed for 75 years of operation but for the construction/build portion of the project only the first stage of the Landfill (Stage 1 Operational Landfill) will be constructed (e.g., Cell 1 and ancillary components to meet requirements for an initial five years of operation).

Development of the proposed facilities is scheduled to commence in 2020, with facility commissioning occurring in 2022.

### 1.2 Site Description

This Environmental Management Plan (EMP) applies to the Iqaluit Waste Management Facility (IWMF), including the Waste Transfer Station (WTS) and Landfill at Iqaluit, Nunavut. Iqaluit is located at the south

end of Baffin Island, on Frobisher Bay at 64° 44' N latitude and 68° 31' E longitude. Access to the City is limited, with the only year-round access provided by commercial aircraft; sealift can also be utilized during the summer months.

The Landfill site is located approximately six kilometres northwest of the Iqaluit and occupies an approximate area of 22 ha. The WTS is located at the end of Kakivak Court. The site occupies an area of approximately 2.4 ha and includes a fenced yard, transfer station, scale house, site office and exterior storage areas.

The overall site locations are presented in **Figure 1-1**, with the layouts for the WTS and the Landfill being provided on **Figures 1-2** and **1-3**, respectively.

### 1.3 Purpose of the Environmental Management Plan

This EMP provides a framework by which to assess, track and document the project's environmental compliance requirements and provides a basis for the systematic management of environmental risks. The EMP is designed to implement, and form a basis for, the environmental protection and mitigation measures described in the Environmental Protection Plans (EPPs) for **two distinct phases** of the overall project:

- a) Construction Phase; and
- b) Operations, Closure and Post Closure Phase.

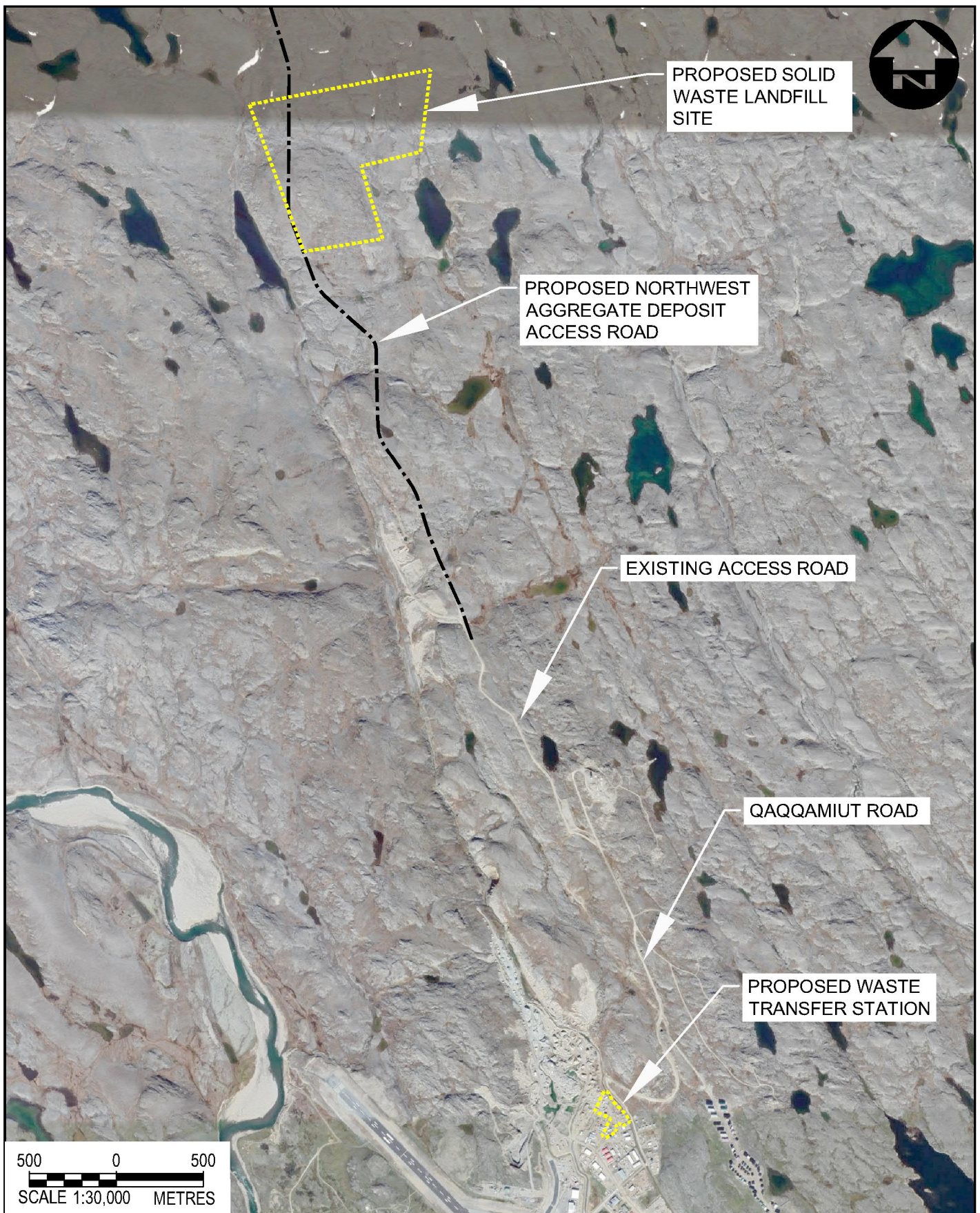
The EMP acts as the overarching document for both of the EPPs (and the supporting Emergency Response Plan (ERP) by outlining the roles and responsibilities for project personnel for both documents and describes the legislation governing these documents. The EPPs describe the environmental protection measures to be implemented throughout the project (beginning with construction and extending through to post closure) and act as a resource for the City and its contractors to avoid or mitigate potential adverse environmental effects to receptors. With a focus on the Operational Phase of the project, the ERP provides guidance to project personnel for responding to emergency situations, and address a range of aspects associated with emergency planning and response.

#### Overall, the EMP describes:

- The City's environmental commitments to regulatory agencies, stakeholders, the natural environment and the general public;
- Roles and responsibilities of project personnel regarding environmental protection and mitigation, inspection, and reporting during the overall life of the Landfill and WTS;
- Environmental protection and mitigation measures to be implemented during the overall life of the two waste management facilities to achieve compliance with regulatory requirements; and
- Procedures to deal with environmental contingencies that may arise during construction, operations, closure and post closure activities.



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DATE

**JANUARY 2020**

PROJECT  
**IQALUIT LANDFILL & WASTE TRANSFER STATION  
ENVIRONMENTAL MANAGEMENT PLAN**

TITLE

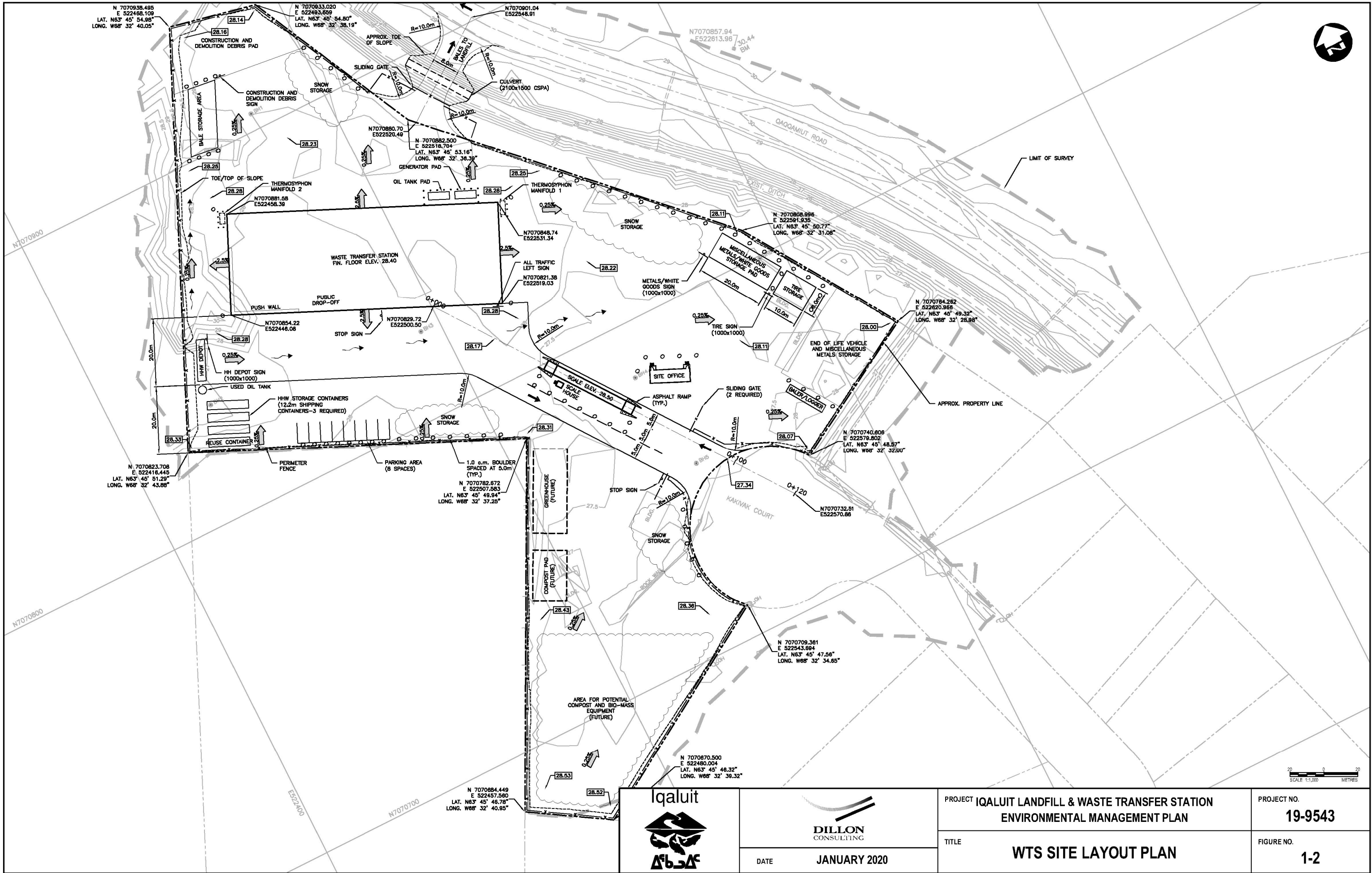
**SITE LOCATIONS**



PROJECT NO.  
**19-9543**

FIGURE NO.  
**1-1**

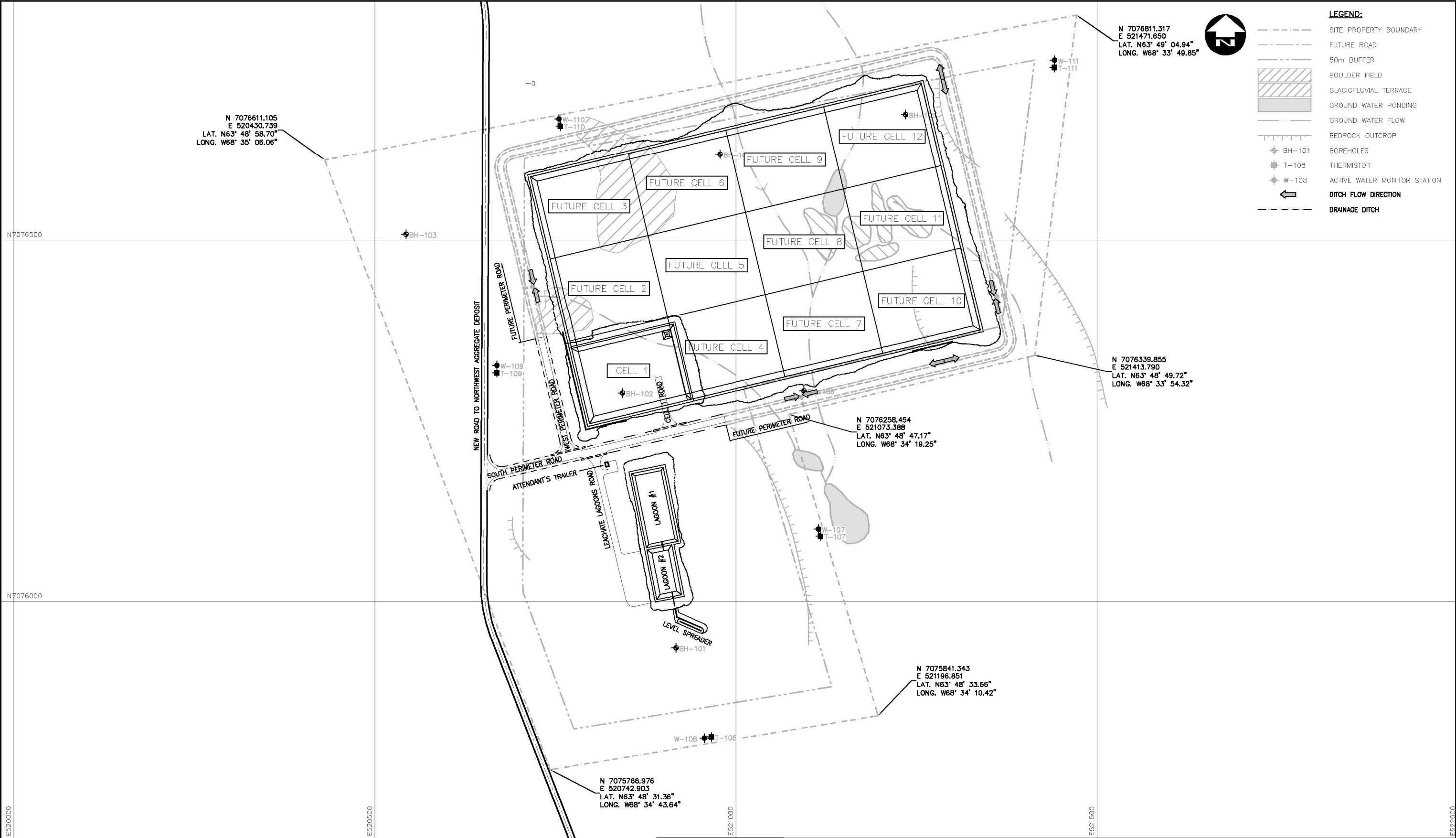


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|  |   |   |                        |
|--|---|---|------------------------|
| <br>Iqaluit | <br>DILLON<br>CONSULTING | PROJECT IQUALUIT LANDFILL & WASTE TRANSFER STATION<br>ENVIRONMENTAL MANAGEMENT PLAN | PROJECT NO.<br>19-9543 |
|  |   | TITLE<br>WTS SITE LAYOUT PLAN   | FIGURE NO.<br>1-2      |

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DATE JANUARYY 2020

PROJECT IQALUIT LANDFILL & WASTE TRANSFER STATION  
ENVIRONMENTAL MANAGEMENT PLAN

TITLE LANDFILL LAYOUT PLAN

PROJECT NO.  
19-9543

FIGURE NO.  
1-3

The EMP describes the environmental protection procedures to be implemented for each of the environmental features/parameters identified in the two EPPs and associated correspondences for this project to maintain environmental compliance by the Operator and its contractors. The EMP will serve as a procedural document to support the objective that all environmental compliance requirements are met, tracked and documented. The EMP will also serve as an educational tool for the orientation and training of project personnel.



## 2.0 Project Personnel, Roles and Responsibilities

The following sections of the EMP outline the roles and responsibilities of the City and its assigned contractors. These responsibilities include reporting, notifications, guidelines on documentation and incident reporting.

It is the responsibility of project personnel to ensure that the environmental commitments outlined in this EMP, as well as the Environmental Impact Assessment (EIA) and associated follow-up correspondence, are adhered to.

The EMP will be incorporated into the orientation and training exercise for applicable on-site personnel working on the project. A copy of this EMP will be available at a location designated on the site at all times during both the construction and operations, closure and post-closure phases. Project personnel working on the site are to be aware of the existence of this EMP, its requirements and where it is located on-site.

The ERP portion of the EMP contains vital information on project personnel, roles and responsibilities, and procedures involved in emergency situations at the Landfill and WTS. It is imperative that the ERP be reviewed by all project personnel before commencing the Operations Phase of the project, as well as at regular intervals during operation (as defined in the ERP document).

### 2.1 Owner – City of Iqaluit

As the Operator of the Landfill and WTS, the City will be responsible for ensuring its third party representative and the Contractor's Site Supervisor are made aware of the EMP and its requirements, and that the commitments contained therein are implemented. The City of Iqaluit is responsible for ensuring that construction requirements, and associated regulations, are followed. The City of Iqaluit will also provide guidance and technical support to on-site personnel with respect to environmental compliance.

As Owner, the City of Iqaluit's EMP obligations will extend through both the Construction and Operations, Closure and Post Closure phases of the overall project.

### 2.2 Construction Phase Owner's Representative – Dillon Consulting Limited

During the Construction Phase, the Owner's representative will be a third party consultant (Dillon Consulting Limited) responsible for ensuring the EMP is implemented in accordance with procedures outlined in this document and compliance obligations are satisfied. The Owner's representative will be responsible for observing the activities of the Contractor to assess whether required environmental

protection and mitigation measures are implemented. The Owner's representative will ensure that reporting and documentation procedures and requirements stipulated in the EMP are completed.

The Owner's representative will, at a minimum:

- Serve as an independent (third party); and
- Provide technical services associated with the completion of the project.

### 2.3 Construction Phase Contractor's Site Supervisor

The Contractor's Site Supervisor will ensure that the requirements of the Landfill and WTS EMP, applicable to its work, are implemented to ensure environmental compliance. The Contractor will also ensure that a separate ERP for work associated with the Construction Phase of the project is completed and approved before construction operations commence. In the event of a spill during the Construction Phase of the project, the Site Supervisor will ensure that the City and Environmental Protection (Government of Nunavut) are made aware of the spill and any clean-up measures are taken.

### 2.4 Contact Information

**Appendix A** provides contact information for key project contacts as of January 2020. This listing is to be reviewed and revised on a regular basis, acknowledging City personnel changes as well as future construction projects.

### 2.5 Documentation Procedures

Continuous and effective communication and documentation is a key component of the environmental protection and mitigation process. Consistent with regulatory requirements, it will serve to support the reliable dissemination of pertinent documents and manuals for project personnel during the completion of site activities.

During the initial construction phase of the project (as well as during future contractor construction activities at either the Landfill or WTS), the Owner's representative and Contractor's Site Supervisor will maintain project documents and updates/revisions of documents (including this EMP), drawings and manuals, permits, and approvals at a designated location on the project site. During Operational, Closure and Post Closure activities (e.g., activities led by the City of Iqaluit), the Owner will be responsible for addressing the requirements of the EMP. Applicable project personnel will be advised of the location(s) of these documents and will be required to comply with the practices and procedures outlined therein.

## 3.0

## Regulatory Requirements

The EMP has been developed in consideration of relevant legislative requirements. The Owner's representative and the Contractor will ensure that work associated with the project is undertaken in accordance with the items outlined in the scope of work for the project. The following legislation is applicable to the Landfill and WTS development for the City.

## 3.1

### Federal Legislation

#### ***Fisheries Act***

This Act prohibits the unregulated deposit of a deleterious substance into waters frequented by fish. It protects both the marine environment and freshwater features.

#### ***Canadian Environmental Protection Act (CEPA)***

Through this Act, any activity that may alter, disrupt or destroy fish habitat, as defined in the Fisheries Act, may trigger a federal environmental assessment under CEPA. Relevant Regulations under this Act include the PCB Regulations (2008), which provide guidance for disposal of polychlorinated biphenyls (PCBs) and/or PCB waste; the Ozone-Depleting Substances and Halocarbon Alternatives Regulations (ODSHAR), which was released in 2016, and provides guidance and regulations surrounding manufacturing, import, export, use, sale, and transfer of these substances.

#### ***Migratory Birds Convention Act***

This Act protects birds crossing provincial and international borders, working with other countries to ensure safe flyways for migratory birds.

#### ***Transportation of Dangerous Goods Act***

This Act creates regulations to monitor and ensure safe practices for the handling, storage, and transportation of designated dangerous goods.

#### ***Workplace Hazardous Materials Information System Act (WHMIS)***

This Act regulates all WHMIS requirements. Any personnel working with or near hazardous materials shall have WHMIS training.

## 3.2

### Territorial Legislation

#### ***Nunavut Wildlife Act***

This Act protects all wildlife in Nunavut and requires an assessment to ensure this project will not harm sensitive species within Nunavut.

***Nunavut Environmental Protection Act***

Among other matters, this Act ensures that environmental assessments are completed before construction related to new projects in Nunavut can commence. Contravention of the Act could lead to fines and/or imprisonment.

***Nunavut Planning and Project Assessment Act***

This Act regulates the planning of new projects and the processes required for project assessment. It promotes one assessment for one project.

***Nunavut Waters and Nunavut Surface Rights Tribunal Act***

This Act governs land use and permitting for new projects and developments within Nunavut.

***Nunavut Safety Act***

This Act ensures safe work practices are in place and followed by all project personnel at work sites. Punishment of fines and/or imprisonment could be administered through the authority of this Act.

### 3.3 **Municipal Legislation**

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No municipal legislation applicable to the proposed project activities or implementation of this EMP has been identified.

### 3.4 **Permits and Approvals**

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***Iqaluit Building Bylaw***

Permits to construct buildings must be obtained from the Building Inspector within the City. If construction is not started within a year of permit approval, the permit becomes invalid.



## 4.0

## Environmental Protection Plans

A separate plan has been prepared for both the Construction Phase and the Operations, Closure and Post Closure Phase of the project. These plans are included as **Appendix B** and **Appendix C**, respectively. The EPPs describe the environmental protection measures to be implemented for the various relevant environmental considerations, during each phase of the project. The EPP for each project phase acts as a resource for the City or its contractors to avoid or mitigate potential adverse environmental effects on receptors.

## 4.1

### Construction Phase Outline

The Construction Phase EPP consists of the following information:

- Introduction
  - Purpose of This Document
  - Regulatory Context
- Project Roles and Responsibilities
- Environmental Considerations
  - Vegetation
  - Wetlands and Watercourses
  - Wildlife and Wildlife Habitat
  - Fish and Fish Habitat
  - Species at Risk or Species of Special Status
  - Heritage and Cultural Resources
- Environmental Protection Measures
- Monitoring and Inspection
- Contingency and Emergency Response Plan
  - Spill Response Plan
    - Small Spills/Leaks
    - Large Spills/Leaks
  - Incidental Discovery of Sensitive or Protected Species Contingency Plan

## 4.2

### Operations, Closure and Post Closure Phase Outline

The Operations, Closure and Post Closure Phase EPP consists of the following information:

- Introduction
  - Purpose of This Document
  - Regulatory Context
- Project Roles and Responsibilities
- Environmental Considerations
  - Species at Risk or Species of Special Status
- Environmental Protection Measures

- Monitoring and Inspection
- Contingency and Emergency Response Plan
  - Spill Response Plan
    - Small Spills/Leaks
    - Large Spills/Leaks
  - Incidental Discovery of Sensitive or Protected Species Contingency Plan

## 5.0

## Emergency Response Plan

The ERP has been included as **Appendix D** and provides guidance to Operations Phase project personnel for responding to an emergency situation.

The ERP consists of the following information:

- Introduction
  - Scope of Plan
- Types of Emergencies Covered by Plan
- Emergency Response Coordinators
  - Emergency Service Contacts
  - Notification Procedures
- On-Site Emergency Equipment
- Emergency Response Procedures
  - Medical Emergencies
  - Vehicle Fires
  - Building Fires
  - Landfill Fires
  - Liquid/Chemical Spills
  - Gas Leaks/Suspicious Odours
  - Explosions
  - Extreme Weather Events
  - Power Outages
  - Dangerous Animal Encounters
  - Violent/Criminal Behaviour
- Evacuation Plan
  - Evacuation Routes
- ERP Distribution and Updating
- Post Emergency Review and Plan Assessment
- Readiness Review
  - Emergency Reporting
  - Simulation Exercises

## Appendix A

### *Project Contacts List*



**CITY OF IQALUIT – LANDFILL AND WASTE TRANSFER STATION**  
**Project Contacts List**

**JANUARY 2020**

| <b>CITY OF IQALUIT</b>  |                |                          |                |
|---|----------------|--------------------------|----------------|
| <b>CONTACT</b>  | <b>PAGER #</b> | <b>WORK #</b>            | <b>CELL #</b>  |
| Dispatch  | N/A            | 979-5650                 | -              |
| Chief Administrative Officer  | N/A            | 979-5666                 | 222-2953       |
| Director of Public Works and Engineering  | N/A            | 975-8509                 | 222-2965       |
| Operations Superintendent, Public Works   | N/A            | 979-5631                 | 222-2956       |
| Manager of Engineering (Vacant)   | -              | -                        | -              |
| Utilidor Manager  | N/A            | 979-5632                 | 222-2966       |
| Utilidor On-Call  | 32             | N/A                      | 222-3243       |
| Garage/Roads Foreman  | N/A            | 979-5668                 | N/A            |
| Trucked Services Foreman  | N/A            | 979-5612                 | 222-2947       |
| Owner's Third Party Representative- Dillon Consulting Limited, Calgary, AB (Keith Barnes) | -              | (403) 215-8885 ext. 4310 | (403) 827-6299 |

| <b>EMERGENCY SERVICES</b>           |                      |               |
|-------------------------------------|----------------------|---------------|
| <b>CONTACT</b>                      | <b>WORK #</b>        | <b>CELL #</b> |
| Dispatch                            | 979-5650             | -             |
| Duty Officer (Fire/Ambulance)       | 979-4422             | -             |
| Fire Chief                          | 979-5657             | 222-5073      |
| Deputy Fire Chief                   | 979-5650             | 222-2955      |
| Deputy Fire Chief                   | 979-5650             | 222-3981      |
| Chief Municipal Enforcement Officer | 979-5670             | 222-5521      |
| RCMP                                | 979-1111<br>979-0123 |               |

| <b>GOVERNMENT RESOURCES- SPILL LINE</b> |             |                       |
|---|-------------|-----------------------|
| 24-Hour Spill Line                      | Telephone # | <b>(867) 920-8130</b> |

| <b>EXTERNAL ASSISTANCE- GOVERNMENT RESOURCES</b>             |                  |
|--|------------------|
| <b>DEPARTMENT</b>  | <b>CONTACT #</b> |
| Environmental Protection, Government of Nunavut              | 975-5900         |
| Indian and Northern Affairs Canada, Nunavut District Manager | 975-4295         |
| Indian and Northern Affairs, Baffin Sub-District             | 975-4295         |
| Environment and Climate Change Canada, Iqaluit               | 975-4636         |
| Department of Fisheries and Oceans, Iqaluit                  | 979-8000         |
| Regional Public Health Officer, Government of Nunavut        | 979-7652         |

| <b>CONTRACTORS</b>      | <b>CONTACT #</b> |
|-------------------------|------------------|
| Baffin Building Systems | 979-5903         |
| Kudlik Construction Ltd | 979-1166         |
| Nunavut Excavating Ltd  | 975-3320         |

| CONTRACTORS                             | CONTACT #      |
|---|----------------|
| RL Hanson                               | 979-6004       |
| Tower Arctic Ltd.                       | 979-6465       |
| Qikiqtaaluk Environmental, Brossard, QC | (514) 940-3332 |
| Nunatta Environmental                   | 979-1488       |

## Appendix B

***Environmental Protection Plan –  
Construction Phase (under separate cover)***

## Appendix C

***Environmental Protection Plan –  
Operations, Closure and Post-Closure Phase  
(under separate cover)***



## Appendix D

*Emergency Response Plan (under separate cover)*